

“All things can be found in a blade a grass, the universe is in your own backyard.”

Adapted from the *Dao De Jing* (道德經)

I. WELCOME AND INTRODUCTION

Workshop Leader: Dr. Marc Jason Gilbert, NEH Endowed Chair in World History, Hawaii Pacific University.



Marc Jason Gilbert received a Ph.D. in history from UCLA in 1978 and, since the fall of 2006, he has been the holder of the National Endowment for the Humanities Endowed Chair in World History at Hawai'i Pacific University. He is currently the Vice-President and President- Elect of the World History Association. He is co-author, with Peter N. Stearns, Michael Adas and Stuart Schwartz, of *World Civilizations: The Global Experience*, now in its 6th edition. He is editor of *World History Connected*, the free e-journal of world history (<http://worldhistoryconnected.press.illinois.edu/>) published by the University of Illinois Press. He led the first workshop in World History in 1983, has served as co-leader of the Southeast Regional NEH-sponsored workshops in world history during the late 1990s and a series of workshops for local teachers in Hawaii sponsored by his university and the Hawaii Council for the Humanities (2007-2009). He has contributed to the curriculum of, and regularly serves as a Reader for the College Board's advanced Placement Examination in World History.

Participants:

Participants are asked to arrive at the workshop site with a sheet offering their own introductions including:

1. Name.
2. School.
3. Grade (s)
4. Years teaching.
5. Role (Master teacher, etc.).
6. Exposure/interest in world history (includes “have no choice!”)
7. Have you ever used “civic learning” or “landmark” lesson planning?
8. Do you teach AP courses? AP World History?
9. Attended a workshop in world history prior to this week and if so where and with whom?
10. Are you a member of the World History Association and/or one of its local affiliates?
11. Have you ever attended a conference or panel on world history?
12. Do you think learning improves when it means having a good time (if not, stop typing, fold arms, and frown).

Purpose of the Workshop

This workshop seeks to assist participants to gain a sense of the importance of local historical places in the teaching of world history and to develop enhanced teaching approaches and materials. It is especially designed to provide K-12 educators with the opportunity to engage in intensive study and discussion of important themes and issues in world history, while providing them with direct experiences in the interpretation of significant historical and cultural sites.

What is World History?

Unlike most history writing of the last two centuries, which was devoted to the explication of the lives of individuals and preoccupied with national and ethnic perspectives, World History is devoted to the examination of common patterns that cross cultural boundaries so as to encompass and study over time the experience of being human. Its major focus is on the process of integration (how the people of the world been drawn together) and difference (how patterns in history reveal the diversity the human experience).

Because it is devoted to historical analysis from a global point of view, World History features a range of comparative and cross-cultural scholarship drawing on many academic disciplines and encourages research on forces that work their influences across cultures and civilizations. Themes examined include large-scale trans-regional population movements and economic fluctuations; cross-cultural transfers of technology; the spread of infectious diseases; long distance trade; and the spread of ideas, religious faiths and cultural ideals.

World history also embraces the humanities and the plastic and performing arts, believing that while economics and politics are central to human history, the expression of human economic and political concerns is best understood through the arts and literature, both formal and popular, as evidenced by the syncretism of the Mughal Empire and the socialist realism of the last century. At the same time, World History is in some ways a product of accelerated globalization, cultural, political as well as economic. The growth of World History as a field is thus both a means of illuminating the human condition in a globalizing world and evidence of this process.

William H. McNeill has suggested that one of the best ways of looking at world history is to examine processes that reach from one global *region* to another. He asks us to look at transfer of disease, ideas, foods, trade items and the migration of people (from slaves bringing jazz to colonial officials returning “home” with new dietary preferences or political refugees) as cultural diffusion. A stress on cross-regional connections reveals that history is thematically polycentric (Zheng He AND Columbus as oceanic explorers), encourages revisionist history by challenging conventional wisdom (such as Eurocentrism and varieties of regional exceptionalism). It also reveals many peoples as global players where national histories do not (corn as the world’s staple food).

The Local is the Global

Teaching World History in Your Own Backyard extends McNeill’s view. Its premise is that since human societies build upon/influence each other through global patterns as movement (migration, transmission of disease, empire-building), conflict, shared environment, economic and cultural exchange (trade, technology, the arts), and because all act to drive increasing globalization (since the first humans left Africa on a journey that populated the entire globe), why would world history *not* be found in your own backyard?

Why Site Visits?

As a lesson plan developed for the study of a historic site in Western Pennsylvania argues:

One of the valuable aspects of teaching outside the classroom is that it generates a sense of excitement and curiosity that is difficult to achieve inside a classroom setting. Students are offered the chance to discover not only the people who lived there, but the events that occurred there. Places like the Old Stone House might be easily over looked at first but these treasures are what make a state or community so special, but may find that they offer experiences and information that help make the past come to life. Students can become historians by studying primary sources, historical and contemporary photographs, maps, and other documents. Students should also be actively examining places to gather information and to piece together facts until final they get "the big picture," and bridge the past to the present-- <http://oldstonehousepa.files.wordpress.com/2010/02/old-stone-house-lesson-plan-french-and-indian-war4.pdf> [edited for considerations of space]

Finding the World in Your Own Backyard: Western Pennsylvania

Despite its global connections, humanity often takes a narrow or parochial view of its existence, a view encouraged by physical distance and conceptions such as nationalism, race and religion that are themselves global patterns but which can promote localized identities. While teachers are well aware of this, their students are not. The search for the means to close that gap is what has brought us here.

“Teaching History in Your own Backyard” surveys the types of places in Western Pennsylvania many of which were designed to be used as resources for the study of local, state, and national history, but which also serve to facilitate the examination of people (Rachael Carson’s birthplace) and events (technological change, political and social trends) that illuminate world history. Location plays a major role in world history as the environment, whether human, geological and/or climatic, is often decisive factors in world history. Thanks to the hysterically inaccurate movie, “The 300,” many students know that the narrow plains of Thermopylae helped shaped a key event in Western history and historical memory. Thanks to their daily newspaper or the blogosphere, they know that rising sea levels pose as much a problem for New York City as they do for Kiribati. Since world history is interdisciplinary as well as global, its study can be used to support many other subjects in the school curriculum. More important, world history is, spatially speaking, omnivorous: forts and military bases (global war), canals and railroads (the industrial revolution), crude log cabins (settler societies) subdivisions (modern urban sprawl, the impact of the automobile) are all as much value to the study of world history as the ruins of a 1,000 year-old Indian village (which the workshop will immediately address below)

II. World History Themes in Western Pennsylvania

This workshop will examine the following thematic categories that can be easily explored in Western Pennsylvania

A. Big History

B. Earliest Human Settlements

C. The Neolithic Revolution and First Urban Civilizations

D. The First Global War

E. “Middle Ground” Cultural Encounters

F. Daily Life in a Settler Society

G. The Abolition of Slavery

H. Industrialization

I. The American Century

J. The Great War

K. The Second World War as a Window on the Marginalized

L. Migration, Diasporas and Ethnic Communities

M. Pandemics and Pittsburgh

N. The Environment

O. Climate Change

P. “Firsts” in World History: Using an “Innovations” Exhibit Approach at the Senator John Heinz Regional History Museum to Teach World History

Appendix 1: Other Resources

Appendix 2: Further Samples

III. Using Templates for Site Visits

Before engaging in a discussion of specific sites that can serve as world history learning tools, the workshop seeks to explore a commonly used template for using historic places for that purpose. It will later discuss other templates, with different requirements, but begins with one developed by the National Park Service which workshop participants can evaluate via a questionnaire that follows it. It is hoped that workshop participants can study this template and complete the evaluation prior to the commencement of the workshop.

A. The National Park Service Guide for Developing Teaching with Historic Places Lesson Plans (Adapted from <http://www.nps.gov/nr/twhp/guide.htm>)

The format used for Teaching with Historic Places (*TwHP*) lesson plans developed by the National Parks Service contain elements required by school districts across the nation and is designed for easy use by teacher and students. It organizes interesting and illuminative material that complements and enriches the study of American history. It is proposed in this workshop to offer materials and a version of that template slightly modified to suit the study of world history at the same level: grades 5-15. However, because a major element/exercise of the workshop will be to translate *TwHP's American History focus to a World History focus, the TwHP guide is offered as follows verbatim with only a few stylistic changes and alterations in terminology that suit the workshop's purpose.*

Each *TwHP* lesson plan begins with an Introduction written to interest both prospective teachers and students in the place and to entice them into reading further. Lessons then progress through a sequence that shows teachers where the lesson fits into the curriculum, defines learning objectives, lists the contextual materials that will be used by the students, and offers information on visiting the site. Lessons go on to provide historical background information for students, introduce a variety of written and visual materials from which students can gather evidence and formulate conclusions, and suggest activities to guide students' learning. At least one of these activities lead students back to their own community where they can explore places related to the lesson topic. The last section of the lesson consists of a page of supplementary resources, allowing students and teachers to further explore themes presented in the lesson plan.

Constructing a Site Visit Lesson

Throughout the TwHP guide, each section title is linked to a corresponding example in one of the program's online lesson plans. Please use these links to explore how other authors created each section of their Teaching with Historic Places lesson. The numbers that follow each sub-head (which function as Websites) refer to the materials in the website at <http://www.nps.gov/nr/twhp/guide.htm>.

I. [Introduction to the lesson](#) (2 - 3 paragraphs)

The Introduction: (1) presents a dramatic and engaging description of the place; (2) hints at the story the place has to tell; and (3) includes a visual image of the site(s) to be studied.

The Introduction should focus like a camera on the site. It should use sensory language that evokes the feeling that one can almost see the people involved, hear what they hear, and view the place as they saw it. **This opening must "grab" the students** so they will want to go on reading the story and become excited about using the lesson in their classrooms.

II. [About This Lesson](#)

A. General Citation

This subsection should begin by establishing that the lesson is based on a *real historic place that still exists*. A general reference to the materials used to create the lesson should be noted, including the National Register of Historic Places registration file name. It should also include references to the author, or authors of the lesson plan.

B. Where it fits into the curriculum

This subsection briefly explains how the lesson can add to established history or geography curricula by categorizing the subject according to Topic, Time Period, and relevant [United States History Standards for Grades 5-12](#).

C. Objectives for students

The objectives should be measurable, indicating the skills students will practice as a result of their study and the knowledge they will gain. For example, an objective might read: "To analyze [skill] the impact the building of the canal had on the growth of communities along its route [knowledge]." An objective also might indicate a generalization that students could draw from the lesson; an example of a generalization would be: "To explain the role irrigation systems played in the development of Texas farmland and other arid lands."

The objectives should relate directly to the materials and activities presented in the lesson. **The basic information students will need to master the objectives should be contained within the readings and visual materials.** Putting It All Together activities sometimes ask students to supplement the data in the lesson by comparing and contrasting it with information from textbooks, additional archival research, **or investigation of community history and historic places.** Students will demonstrate their mastery of the objectives by completing the questions in Determining the Facts and Visual Evidence, and the activities in Putting It All Together (see sections III C and III D below).

**Each lesson should have four to five measurable objectives.*

**At least one of the listed objectives should reference the local activity in Putting It All Together.*

D. Materials for students

Essentially this entry should list the materials to be used by the students in accordance with the lesson plan, including all maps, readings, and visual images.

E. Visiting the site

This subsection offers information on visiting the site for those who can do so. This section is very brief. It reinforces students' awareness that the lesson is based on a real place. It also lets the students and teacher know if the site is open for visitation, how to contact the site, and if the site has a Web page.

III. Teaching Activities

A. [Getting Started](#)

Rather than serving merely as illustrations for the text, images are documents that play an integral role in helping students achieve the lesson's objectives. The purpose of the Getting Started section is to immediately engage students' interest by raising questions that can be answered only as they complete the lesson.

First select an intriguing image that can also be used in the Visual Evidence section.* Ask an inquiry question to get students thinking about what they are going to learn. The inquiry question should be thought-provoking and serve as a prelude to what is in store in the lesson plan. Keep in mind that students study the Getting Started image even before they know the topic of the lesson. To facilitate a class discussion, teachers may print this page and use it to make an overhead transparency.

**As no information is provided about the image in the Getting Started section, using the same image in Visual Evidence allows students to eventually learn more about it in greater depth.*

B. Setting the Stage (2 - 4 paragraphs)

This section provides both teachers and students with a short overview of the material essential to the students' understanding of the lesson. The section might also explain unusual or unique characteristics of the site and provide contextual definitions for specialized vocabulary. Define specialized vocabulary within the text, either in this section or in the readings, instead of creating a Glossary or Vocabulary List.

The teacher will decide how to introduce this information to the students. The teacher may read it aloud, make copies for the students to read, or use it as the basis of an informal lecture. Deciding what belongs in Setting the Stage and what should be left for Determining the Facts can be difficult. Keep in mind that Setting the Stage provides historical background and Determining the Facts includes the essential information related to the focus of the lesson. Keep Setting the Stage short, but be sure to provide enough information for students to answer the related questions in the Locating the Site section.

C. Locating the Site (1 - 2 maps)

This section presents one or two maps to guide students in locating the site within the state; within the United States; and in relation to important natural and man-made features such as rivers, mountains, and transportation routes. If more substantive geographic information is relevant to the lesson, it might be included in Visual Evidence. Each map should include two or more questions for students. Extended captions may be included to provide students with information necessary to answer the questions.

D. Determining the Facts (2-3 readings)

This section contains the readings and visual materials students will need to gather information about the place. For each reading and visual presentation, the lesson includes a series of questions to assist students in gathering the appropriate facts.

Each reading will provide data on one aspect of the place used in the lesson--its reason for being and the people associated with it. Together with the visual evidence, the readings should provide sufficient information for students to understand why the place is important and why it has been listed in the National Register of Historic Places.

The first reading usually focuses on the "general story" that the place has to tell. This reading often is adapted from National Register documentation, but it may also include material from other sources, usually secondary. Primary source documents such as letters, speeches, or newspaper articles can be compiled as a reading with

short narrative links. Other written materials may include charts, graphs, census data, inventories, quotations from one or more people, etc. Number each reading and give it a title.

Three to five questions for each reading are designed to determine whether students have gathered the appropriate facts. These questions may be specific to each reading, or ask students to combine information from readings. Each set of questions should progress from recall ("When did settlers first enter the area?") to critical analysis ("Why would being the center of trade lead to a high degree of cultural sophistication and affluence?"). Teachers may use some or all of these questions. They may write them on the chalk board, make copies for all students or for small groups of students working together. The main purpose of the questions is to make sure that students can make sense of the material.

E. Visual Evidence (3-6 visuals)

This section provides students with visual materials such as photos, paintings, drawings, sketches, and sometimes additional maps. Questions for each visual are designed to help students interpret the materials. Visuals selected for this section are not mere "illustrations," but should be treated as additional documents. Questions should expand students' skills in "reading" this kind of evidence. Extended captions may be included to provide students with important information. Remember to include the Getting Started image allowing students the opportunity to learn more after having had some context in the readings and maps.

NOTE: When students have completed the exercises in Locating the Site, Determining the Facts, and Visual Evidence, they should have a good understanding of the issues, events, people, features, and vocabulary relevant to the place and the specific focus of the lesson. It is in preparing these sections that lesson writers will discover whether they have a clear, reasonable focus for their lesson. At this point authors may realize they need to provide teachers and students with additional background information in the Setting the Stage section.

F. Putting It All Together (3 - 4 activities)

It is in this section, after gathering evidence from the data provided, that students are asked to arrive at some conclusions. The activities should engage students in lively manipulation of the data in a variety of ways. (Please refer to the following section on Student Exercises and Activities, under "Notes to Authors").

One or more of the activities should focus the students' attention on their own community. They should look for places in their own community that relate to the topic of the lesson. For example, "Have students research the economic base that allowed their community to grow and prosper, and then find historic places that represent that economic base." Conversely, students might begin by looking for historic places that represent certain themes and then research their importance to the community; for example, "Find examples of folk housing in your community, and then research the culture of the group who introduced the style or construction technique."

Activities should encourage and guide teachers and students in using the community's resources, such as preservation groups, historical societies, libraries, archives, city planners, senior citizens, faculty from nearby colleges and universities, and--of course--the places themselves. Activities can encourage and guide students to play an active role in taking care of places in their community that document its history and culture. As a community service project, students might conduct research, develop interpretive materials, make presentations to community leaders, or help rehabilitate deteriorating structures and sites.

Students' ability to successfully complete the activities in this section should demonstrate their mastery of the learning objectives. It is at this point you should review the student objectives to make sure they correspond to the activities.

G. Supplementary Resources (6-10 references)

This final section supplements the lesson plan with online resources where students and teachers may find additional information about the place(s) studied in the lesson as well as the different topics and themes addressed. The author should provide a list of Internet sites that compliment the lesson. A short description is needed for each site to demonstrate how it relates to the lesson plan. Keep in mind that the source should be reputable and should not be a commercial site. Some strong examples of sources include educational institutions, the Library of Congress, the National Archives, the Smithsonian, historical societies, museums, and library collections.

Selecting a Focus

Most historic places have many stories to tell. One of the most challenging tasks in writing a lesson plan is selecting one of those stories on which to concentrate. You cannot include everything about a building or site that is interesting and still keep the story manageable. Use only the information that will yield a better understanding of the important concept or theme you have chosen. Even lessons that use more than one historic place need to focus on a single theme. It may be helpful to write out a statement of focus before beginning, and refer to it periodically as you develop the lesson plan.

Writing Style

The Introduction, About This Lesson, and Putting It All Together are written for the teacher. Writing style should be appropriate for adult professionals. Portions intended for students include Getting Started, Setting the Stage, Locating the Site, Determining the Facts, Visual Evidence, and Supplementary Resources. These should be written in clear, relatively short sentences. It is important, however, not to talk down to the students as they are surprisingly sophisticated. When using primary sources in the readings, some of the language may be arcane, or ungrammatical, or use unfamiliar colloquialisms. If the language is particularly difficult in a reading, this issue might be addressed in the questions on the reading, or it may be necessary to provide an explanation within the reading. Lessons generally target middle school grades, but should be adaptable for use from upper elementary through high school grades; some have been used in college classes.

Length

Generally, each lesson runs 12-16 published pages, including text and visuals, which is 3,000-5,000 words. This length provides maximum flexibility for teachers, who can use a lesson plan as is, or adapt it to their own needs. For example, a teacher might pick out portions to insert into prepared units, or expand a lesson by creating additional activities.

Selecting materials for the lesson

Select materials that focus on specific points you want to make, and do not include irrelevant written or visual information. It is important that both written and graphic materials be of publishable quality and also easily duplicated for students' use. For photographs and maps, check to make sure that there is as much contrast as possible between light and dark tones, that the image is not too cluttered, that any details stand out clearly, and that printed words are sharp and clearly legible. Keep in mind that many images will need to be reduced in size for publication. Also remember that most materials lose resolution and clarity when they are photocopied, so choose the clearest and most vivid visual materials available.

If your lesson is to be posted on the Internet or published in print, you will need to obtain written permission from the author, artist, or publisher for any materials that are not in the public domain. Contact Teaching with Historic Places for sample permission forms.

Readings

A reading might be constructed from one or more sources. These can be primary or secondary sources. To the greatest extent possible, use the exact language and style from primary sources, editing for clarity only when absolutely necessary. Use ellipses to shorten and brackets to indicate your editorial clarifications. Whether you are using primary or secondary sources, be mindful of copyright laws, using footnotes or endnotes, or obtaining permissions to use materials, when required. At the end of the reading, indicate if it is "*excerpted from...*" or quoted directly from its source, "*adapted from...*" the source or "*compiled from...*" several sources. You must provide a complete citation for all materials used, and must provide such a citation for anything that will be published: (1) for written materials you need to cite the author and/or editor, title of publication, place of publication, publisher and year of publication (for books), volume number and date (for articles), and pages cited or used as background; (2) for graphic materials you need to cite the location of the original, (State Department of Archives and History, Raleigh, NC), the date the photograph was taken (approximate, if that is all that is available), and the photographer if known.

Student Exercises and Activities

Make sure the lesson does not depend on students having to visit the site that is the subject of the lesson plan.

The materials used in *Determining the Facts* and *Visual Evidence* must be sufficient for students to gather the evidence they will need. The activities in *Putting It All Together*, on the other hand, will lead students to go beyond the information provided in the lesson plan and look at the larger picture. The activities in this section might ask students to compare and contrast the information and the place(s) in the lesson plan to other information they have or will research. Activities also should lead students to discover and understand the historic places in their own communities and how they fit into the broad themes and events in American history. Students can conduct interviews with family members, community elders or business leaders. They can do research at a library, newspaper or government offices. They can locate maps, journals, diaries or other kinds of documents. They can work with local preservation groups, museums or historical societies. For many schools, structured field trips are few and far between. It is better, therefore, to design activities that individual students or groups can do on their own--to and from school, overnight, and weekends.

Exercises for students should provide opportunities for practicing both basic (reading and writing) and critical thinking (analyzing and interpreting) skills. Both exercises and activities should guide students through challenging questions to examine and explore evidence and form conclusions. Activities should appeal to different learning styles and teaching techniques: independent study, cooperative learning, imaginative presentation. Activities also should suggest ways to get students to explore their own communities and ways to involve preservationists, interpreters, and local historians in the classroom. The goal should be to help students recognize that preservation and stewardship of our natural and built environments are important components of good citizenship.

Using an Exemplary Site Teachers Guide:

Necessary Resources: <http://www.iowahistory.org/historic-sites/blood-run/teacher-guide.html> and

Toolesboro Indian Mounds guidebook at <http://www.iowahistory.org/historic-sites/toolesboro-mounds>

The Hopewellian mounds at Toolesboro, identified in this lesson plan by the settler name ‘Blood Run,’ are among the best-preserved and accessible remnants of an ancient culture flourishing from around 200 B.C. to 300 A.D. The five-acre site includes several large surviving mounds, an education center and a prairie demonstration plot. The State Historical Society of Iowa owns and preserves the Toolesboro Indian Mounds and Museum. The mounds are listed on the National Register of Historic Places and designated as a National Historic Landmark and State Preserve.

Hours

The Visitor Center/Museum is open:

Memorial Day through Labor Day
Wednesday – Sunday 12:30 p.m. – 4:30 p.m.

Labor Day through October 31 Sunday 12:30-4:30

The grounds are always open to visitors.

Location

Located on Iowa Highway 99 in Toolesboro, Iowa.

Site Contact: Louisa County Conservation Board, Box 261, Wapello, Iowa 52653, Telephone: 319-523-8381

Pre-Visit Activities

Talk about artifacts and how they are used to interpret history. An artifact can tell us much about the people, the time, and the region from which it came. An artifact reveals what materials it is made from, when and where it was made, and how it was used. Sometimes its color and style tell us about popular trends. All of this helps us determine its relative value within the "material culture." [from previous guidebooks]

Discuss what artifacts can tell us about individuals. Have each student bring in an "artifact" that reveals something about him or her (a belief, a tradition, a hobby, a personality trait). Gather the "artifacts" and have students identify who brought in which one, how they know, and what they can say about that student from the "artifact." [from the Toolesboro Indian Mounds guidebook]

Discuss the fact that Native American burial mounds are like our cemeteries—sacred. It is as disrespectful to walk on the mounds as it is to step on the graves in modern cemeteries. Do the Mound Maze activity—and make sure you don’t trespass on any mounds!

On-Site Activities

Include these activities in your visit to Blood Run:

As you walk around the site, look at the mounds. Pretend you have x-ray vision and can see inside the mounds. What do you see in there? Draw a picture of what you see.

Take the tour around the grounds. Look at the remains of the farmstead. What might be preserved 100 years from now? Look at the mounds. Do you think they will still be visible in 100 years? What might still be there?

Compare and contrast the remains of the farmstead and the mounds. Which group, Oneota or European-American farmers, had a larger impact on the land? Who altered the appearance of it more? (Remember: a large part of the land used to be tall grass prairie.)

As you take the tour, play detective and note the features (buildings, mounds, paths) and artifacts that you see. Can you figure out who made them and why or why not? For example, which group of people, Oneota or European-American farmers, might have built a fence? Why might the farmers need a fence and not the Oneota?

Look at the remains of the farmstead. Imagine living there over one hundred years ago when it was new. As a member of a farming family from the late nineteenth century, what might your life be like? For example, what chores would need to be done and who would do them? What would you eat for dinner?

One of the reasons the Oneota built mounds was to make sure everyone knew what land belonged to whom. Play detective and find similar clues about the people who have lived on the land since the Oneota did. The farmers didn't build mounds to mark their land, what did they build instead?

Post-Visit Activities

Ask some of the following questions of your students after visiting Blood Run. After each question we give some suggested answers. Have your students expand on these answers.

Draw a picture of what your x-ray vision revealed inside the mounds. Draw a picture of what your x-ray vision might reveal at a local cemetery. Are there any differences? What do the pictures tell you about life 300 years ago and life today? (Consider: both cultures are similar in that they both have ways to honor the dead) [adapted from the Toolesboro Indian Mounds guidebook]

Imagine what it would have been like to live at Blood Run 300 years ago. What would you eat for dinner? Where would you sleep? What might the village have looked like? Draw a picture of what your family and house might have looked like. (Your dinner was gathered from the surroundings: bison meat, acorns, blackberries, and corn.) [from the Toolesboro Indian Mounds guidebook]

Discuss cemeteries in your community, such as Grand View Swedish Mission Cemetery just south of Blood Run. What is there? What can the cemeteries tell us about the community? (Consider: ages, relationships, religious beliefs, group associations) Compare and contrast the mounds at Blood Run to a local cemetery. Name some similarities, some differences. [from the Toolesboro Indian Mounds guidebook]

Imagine you are an archaeologist 2000 years from now trying to solve the mystery of life in Iowa. What clues about it might you find? What wouldn't you find? (Consider: plastic bottles versus books and newspapers) What artifacts might be difficult to interpret? (Consider: records and CDs, a shoehorn, fingernail clippers, a zipper, toy figurines) [from the Toolesboro Indian Mounds guidebook]

Archaeology is based on the study of material objects. From these objects, archaeologists must piece together the puzzle of the past, often without the help of written records or living people. This is like putting together a large jigsaw puzzle without a complete image and not all the correct pieces.

What do the archaeologists miss about culture? (Consider: individuals, language, stories, voices, songs, music, ideas, dance, manners, games, and beliefs) [from the Toolesboro Indian Mounds guidebook]

Detective Work

Here are some suggested themes for student research. Their results might be presented in both written and oral reports.

What did the Oneota and their descendants look like? Investigate books and magazine articles (*The Goldfinch* is a good starting place) about Native Americans and look for clues. Draw what their clothing looked like (for winter and summer), how they did their hair, and who wore the ornamentation (necklaces, bracelets, earrings). [adapted from the Toolesboro Indian Mounds guidebook]

Investigate other mound sites in Iowa, such as the Marching Bear Effigy Mounds and Toolesboro Indian Mounds. The Native Americans who built these mounds did not have tools like bulldozers and tractors to use for construction. Instead, they used their hands, baskets, hoes made of shell and bone. One basketful of dirt weighed approximately 25 pounds. Can you figure out a system to build a mound using only the Oneota tools? Draw what it would look like. [adapted from the Toolesboro Indian Mounds guidebook]

The Oneota didn't raise corn like farmers do today. How did they do it? Investigate the methods used by Native American groups (the Oneota weren't the only people who grew crops) and compare these methods to the ones used by farmers today. List some of the similarities and differences. Did one system work better than the other? Why?

"Blood Run" is an interesting name for a site and a creek. Historians aren't quite sure where the name came from (Henning and Sass 1992). Place names often reveal some of the history of the town or region. Investigate the name of your town (county, street, school). Where did the name come from? Was your town named after a person, another place, or a prominent feature? Why? That is, if it was named after a person, what did that person do for the town?

The book *Motel of the Mysteries* by David Macaulay (Houghton Mifflin Company, 1979) is about future archaeologists misinterpreting late-twentieth century American culture. Read the book and examine the "Treasures." (Some examples of the "Treasures": toilet paper is interpreted as "Sacred Parchment," a faucet as a trumpet, a toilet plunger as a percussion instrument, a toilet seat as "the Sacred Collar") Why were these items misinterpreted? Are there other items, places, or activities that might be misunderstood by future archaeologists? [Toolesboro Indian Mounds guidebook]

Create a list of 20 items that could be placed in a time capsule as "artifacts" that represent current American culture. Alternatively, create this list to explain American culture to people unfamiliar with it (aliens from another galaxy, someone from the future). Each item should have a reason why it should be included. [adapted from the "Capsule of America" activity in Hawkins 1984]

Visit a local cemetery and do "above-ground" or "graveyard" archaeology. What characteristics (shape, size, design) of grave markers change over time? What types of symbols are used? What do these symbols say about the person buried there? (Consider: soldier, religious beliefs, groups associations, age) Look for markers with lambs on them. What do the lambs mean? Do rubbings of the markers using a pencil or a crayon and a large sheet of paper. Compare rubbings from different sections of the cemetery. (See "Doing Local History." *The Goldfinch*. Vol. 14, No. 2, Winter 1992 for description, complete instructions, and suggested activities.) [adapted from *The Goldfinch* and Deetz 1977]

Doing History

These activities may be used to further explore ideas presented at Blood Run. You may want to adjust the activities to the students' interests and abilities.

The year is A.D. 1678, and the leader of the local Oneota village has just traded with the European fur-traders passing through the area. Write a short story (or a play) from the point of view of a person your age in the village about what new and interesting items are being traded (new trade items included horses, glass beads, copper and brass pots and bracelets, and iron knives). What are your reactions to these new items? Do you like them better than what you had before? Then write a story (or play) about a similar situation today. Draw pictures to go along with the story. [adapted from the Toolesboro Indian Mounds guidebook] The red stone tablets or plaques had designs scratched on them that probably represented mythical creatures. These tablets were placed in medicine bundles. (Anderson 1975, 1981) Native American medicine bundles included tablets, animal teeth and bones, herbs, and other special items.

Create your own medicine bundle that contains items unique to you. Include your own red stone tablet with a design and other items you consider special or unique to you.

The Blood Run site does not have a museum or an Educational Center connected with it. After touring Blood Run and learning about the site, design an exhibit for the site. What types of artifacts would you include? (arrowheads, pottery, beads, tools) Would you include artifacts from the farmstead? Or, design a visitors' brochure for school children about Blood Run. What aspects of the site would you focus on? What is the most interesting to you about the site and the Oneota? [adapted from the Toolesboro Indian Mounds guidebook]

Bring in a strange collection of "artifacts" (such as random items from a junk drawer, board game pieces, etc.). Have students create an imaginary culture based on these artifacts. The students should define what each artifact was used for and why. Alternatively, students can create their own artifacts for a make-believe culture.

Archaeologists study what people leave behind: that which was forgotten about, lost, or discarded as trash. In fact, a number of present day studies have focused on land fills. Try "Garbage-Can Archaeology." Gather two trash cans from different rooms in the school, such as the library and another classroom (but do not tell students their points of origin). Have the students go through the trash cans noting the placement of the items (the stratigraphy). Then have them classify the contents by type of artifact. Can they determine the activities that occurred where the trash can came from? (See *Discovering Archaeology: An Activity Guide for Educators* by Shirley Schermer, 1992, for description and more detailed instructions.) Alternatively, walk around a schoolyard or a park looking at the ground. Make a list of the "artifacts" on the ground. Look also at the "features" (paths, structures, land shapes). What types of items are they? What do they tell you about the site? Use descriptive language and not the common names of the site, such as baseball diamond or sandbox.

B. Workshop Exercise: Evaluating the NPS Historic Places Template

Instructions to Workshop Participants: Read the TwHP Template and, if you can, the Indian Mounds guidebook/teachers guides: <http://www.iowahistory.org/historic-sites/blood-run/teacher-guide.html> and

Toolesboro Indian Mounds guidebook at <http://www.iowahistory.org/historic-sites/toolesboro-mounds/>

1. What are some strengths of TwHP Template?

2. What are some of its weaknesses?

3. What is it missing or undervalued?

4. What would you add? Subtract?

Identify at least eight historical themes, processes, categories, or characteristics of “what world historians do” that can be derived from this American History- centered lesson’s focus on the Indian Mounds and the Oneota?

1.

2.

3.

4.

5.

6.

7.

8.

C. What do we really mean when we say “site visit”?

1. Generally, the term site visit refers to visiting an historical place, i.e. learning by visiting a “historical place” such as a landmark. However, you may would consider any source which offers in a local setting for encountering an encounter with world history. This includes many different types of activities, with appropriate pre-activity arrangements and approvals, especially for the exercises for which samples will be offered in the Appendix. These exercises may address:

- a. An interview with a regional NOAA official to supplement a report on local climate change.
- b. A visit to a Fair Trade business that includes a talk with an owner or manager on how they became involved in fair trade practices, who are their producers and customers, etc.
- c. A visit to a “green” company plant or headquarters that will offer an interview and or a tour that illustrates how and why they have adopted an eco-friendly corporate footprint.
- d. A visit to a War Memorial, with interviews with visitors, to be used in conjunction with a report on a global conflict.
- e. A visit to a local place of worship serving a Diaspora population, such as a Hindu temple, combining an interview with a temple official and a tour.
- f. A visit to a Chinese/African/etc. traditional medicine shop/store preceded by a study of the principles of Chinese etc. traditional medicine and including a conversation with an owner-manager regarding the principles and practices of traditional medicine in their tradition and a general discussion of the course of their practice.
- g. A museum exhibit or a virtual visit so long as it is accompanied by an interview (by phone if the only option) with the curator so as to incorporate local-to global meaning.
- h. A simulation of an event or a “you are there” report based on a visit to a dedicated museum/site or virtual visit provided by a historical site’s web site and other sources of research (example, the Donora Tragedy).
- i. A visit to an art exhibition with world historical or multicultural content.
- j. A observation of a performance, secular or religious.

Let us discuss your suggestions and concerns regarding such activities, such as: Age appropriate? Safe? Waivers? Work- arounds? Parental involvement? Teacher escort? Group activity?

D. A Basic Site Visit Guideline:

1. Search the WWW for websites introducing the site to be visited. Read articles on the WWW pertaining to the site to be visited. Identify its world history content, for example: what larger processes or forces led to the annexation of Hawaii. Engage in comparative study, for example: for a Doughboy memorial, is there one in Germany for their fallen soldiers and how similar/different are they in content?
2. Call ahead and arrange a date for your visit so you can meet with an authority at the site. Arrange for a tour or at least an opportunity to talk with those responsible for the site. Ascertain if there are upcoming activities that will enrich your visit or events your visit should be carefully timed not to miss (chanting, for example).
3. Submit a Draft of Your Site Visit offering rationale, locale, contacts, research and planned activities on site.
4. Be sure to interview responsible authorities. Also be sure to ask other visitors for their comments. This is important. Such mini – interviews will vastly improve your grade depending on their quality and length.
5. Bring a digital camera. Take pictures that indicate the setting of the site. Also take close up shots of important features, such as plaques or informational signs that describe the site. Digital video can be taken and used with your presentation. You may also use a tape recorder to take notes: ask permission to tape any interview.
6. Ask for informational literature such as guides or pamphlets and, especially if photos are forbidden, for copies of brochures or catalogs you can mine for illustrations, lists of programs and what is on display.
7. Make sure you gather contact information that would enable others to repeat your visit.
8. Keep in mind that your project report will be read by students who, on the basis of your essay, must answer questions and undertake an analysis of your subject. You must develop four of each type of these questions (This site provides insight into pictures brides; what were some of the characteristics of that program?)
9. You must provide a bibliography of sources consulted when preparing your research and also any websites that effectively illuminate your subject – not just any URL, but one that is clear and informative.
10. Prepare a report of your site visit that uses your photographs, but be sure to hand in both a hard copy and an electronic version of your paper in Word. Also be sure that you have on your diskette separate, back – up versions of your photographs in their original jpeg file format.
11. PowerPoint presentations can be made as presentations, but not submitted for a grade. See examples provided.

D. Historical Marker Site Visit Template with Examples of “Draft Site Visit” and Marker Resources

Despite its name, the subject of a visit to or use of a Historical Marker is not the marker itself, but the manner in which it connects us to world historical themes and processes, as well as global events. The marker serves only to form a base or jumping off point for further research and deeper understanding of the wider world.

Choosing a Historical Marker

Visit explorepahistory.com and the National Register of Historic places for a list of historical markers in western Pennsylvania. See also: <http://www.waymarking.com/cat/details.aspx?f=1&guid=9fdd3e36-45b1-48bc-b028-7e33c4db0ba0&st=2>

Others:

Allegheny City Historic Sites http://en.wikipedia.org/wiki/Allegheny,_Pennsylvania

Allegheny County http://en.wikipedia.org/wiki/Allegheny_County,_Pennsylvania

Armstrong County Tourist Bureau <http://www.armstrongcounty.com/history.php>

Beaver County On-Line History <http://www.bchistory.org/>

Beaver Country Historic District:

http://www.livingplaces.com/PA/Beaver_County/Beaver_Borough/Beaver_Historic_District.html

Butler County Heritage Center <http://explorepahistory.com/attraction.php?id=542>

Crawford County <http://www.nationalregisterofhistoricplaces.com/pa/Crawford/state.html>

The Carnegie Science Center, with its Museum of Natural History

The Carnegie Museum of Art Center <http://web.cmoa.org/?p=136>

East Washington Historic District http://en.wikipedia.org/wiki/East_Washington_Historic_District

Eire County Historic Sites http://www.cmh.pitt.edu/pdf/pennsylvania_history.pdf

Explore Pennsylvania History, http://explorepahistory.com/show_results.php

Explore Pennsylvania History, <http://explorepahistory.com/>

Frick Art & Historical Center (<http://www.thefrickpittsburgh.org/index.php>)

Historic Pittsburgh Website

<http://www.lib.umd.edu/dcr/events/symposium/galloway.html>

http://www.livingplaces.com/PA/Westmoreland_County/Ligonier_Borough/Ligonier_Historic_District.html

The Irish Center

The Little List (Fort Markers) at <http://www.thelittlelist.net/fgstofry.htm>

Mercer County Historical Society <http://www.mchspa.org/>

Pennsylvania State Trails - Trails in Pennsylvania--<http://www.traillink.com/state/pa-trails.aspx>

Pittsburgh History & Landmarks Foundation <http://www.phlf.org/>

Pittsburgh City Legacies http://www.city.pittsburgh.pa.us/wt/html/city_legacies.html

Pittsburgh Neighborhood Tours

Senator John Heinz Pittsburgh Regional History Center

Spotlight on Main Street (South Side)

University of Pittsburgh's Center for World History

University of Pittsburgh's 'Cathedral of Learning'

Washington County History & Landmarks Foundation:

http://en.wikipedia.org/wiki/Washington_County_History_%26_Landmarks_Foundation

Composing a Draft Assignment Prior to Marker Site Visit

Before visiting a Historical Marker use the attached template to create a draft of your assignment to submit for your instructor's approval:

1. Marker Identification:

- A. Subject (Person, place or thing)
- B. Marker Text
- C. Location
- D. Date created

2. Identify the relationship between the Marker and World history. This task can often be eased by a Google search of the subject, followed by the term "world history."

3. Identify any related location serving the Marker's subject (nearby museum, birthplace, home, battlefield, cemetery, etc.). Use Google Maps and Google Earth where possible.

4. If possible, locate those responsible for erecting the Marker for additional information about the site, such as its recent relocation due to historical research, etc., an historical anniversary, etc.

Visiting the Marker

1. Photograph the Marker and its environment.

2. Visit a nearby or related site (birthplace. Battlefield, museum, gift shop), identify yourself as a student doing a school assignment; inquire about the site from local personnel (park rangers, museum staff, sales persons) about:

- A. Is the site popular? Do they enjoy working at the site?
- B. Who visits it?
- C. Do school groups visit it?
- D. Is there any historical memory that brings people to the spot, or any new appreciation of it that they are leaving with?

3. If possible, talk to visitors to the site, again identifying yourself as a student doing a school assignment, and ask them:

- A. Why did they stop to visit the Marker?
- B. Have they visited the site before?
- C. Do they have a personal connection to the subject?
- D. Where they aware of the significance of the Marker subject to national or world history?
- E. If they are teachers, ask them if they would consider sending students to do a similar exercise.

Write-up of Exercise

1. Begin with an introduction of the Marker and the way in which it can illuminate world history
2. In the next paragraph, recount the information in #1 above, using your photographs for illustration.
3. In subsequent paragraphs, related the information you gleaned from # 2 and #3 above.
4. Write a conclusion about what you learned about the subject illuminated by the marker, about the people you met and, if possible, the nature of historical memory.
5. Submit via hardcopy and email.

Example of Universal Pre-Visit Draft:

This draft is designed not serve all site visit exercises. Note that it includes most of the required elements of a Marker Site Visit.

Eljean Madio
11/4/2010

Site Visit "Draft"

Site: Hawaii's Plantation Village (Museum)
94-695 Waipahu Street, Waipahu 96797

Contact info

Email: hpv.waipahu@hawaiiantel.net
Phone: 677-0110
Contact name: Rechie Panganiban *see emails
Website: <http://hawaiisplantationvillage-info.com>

Expected visit date: Wednesday, November 10 at 10am for docent-led tour

Web information about the site:

This site is a historic outdoor museum located in Waipahu that prominently displays the lifestyles and experiences of Hawaii's plantation workers. It includes furnished homes and other community structures of the multi-ethnic and cultural groups of immigrants that came to Hawaii in the mid 1800s and the 1940s to work on sugar plantations. Some of these structures are original while some are replicas. This museum also showcases an on-going cultural display on "Portuguese in Hawaii" which I will include in my paper. According to the website, the outdoor museum offers exhibits, artifacts, and library and photo collection of the plantation history, which includes documents, correspondence, birth and death certificates, medical records, employee ledgers, and scientific testing. I will definitely utilize these resources to further my research.

Significance of the Plantation Village:

In the late 1800s and early 1900s, Hawaii became known for its plantations, especially sugar plantations. Labor was needed as plantations grew, especially since the Hawaiian population dramatically decreased due to disease and would not be able to make up the majority of the labor force. Thus Asian immigrants were brought in to work on these plantations, primarily Chinese, Japanese, Portuguese, and Filipinos. Because they lived together in close quarters in plantation villages, lots of cross-cultural encounters and exchanges occurred. Pidgin was one of the products of the multi-cultural and multi-ethnic exchanges because it was a way to communicate with all these different groups. There were also cultural encounters and exchanges that occurred between these workers and the white plantation owners as well.

Sources:

- Bakiano, Agapito, Lindsay Faye, Sulpicio Venyan, Dimitrio Rivera, and Mauro Plateros, interview by Ed Gerlock, Gael Gouveia and Chad Taniguchi. *The 1924 Filipino Strike on Kaua'i* (July 1979).
- Gescewender, James A., Rita Carroll-Segun, and Howard Brill. "The Portuguese and ^{Hawaiians} of Hawaii: Implications for the origin of ethnicity." *American Sociological Review*, 1988: 515-527.
- Jung, Moon-Kie. *Reworking Race: The Making of Hawaii's Interracial Labor Movement*. New York: Columbia University Press, 2006.
- MacLennan, Carol. "Kilauea Sugar Plantation in 1912: A Snapshot." *Hawaiian Journal of History*, 2007: 1-34.
- Mindess, Harvey. "Humor in Hawai'i: Past and Present." *Hawaiian Journal of History*, 2006: 177-199.
- Rego, William, Trinidad Marcella, Emigdio Cabico, Slim Robello, and Harold Shin, interview by Araceli Agoo, et al. (May 1977).

Typical Marker Study and Resources



Helen Richey

Region: Pittsburgh Region

County Location: Allegheny

Marker Location: Renzie Park, Corner of Eden Park Boulevard and Tulip Drive, McKeesport

Adapted from: <http://explorepahistory.com/hmarker.php?markerId=960>



McKeesport Historical Center

http://www.mckeesportheritage.org/helen_richey

WORLD HISTORY THEME

The growth of professions open to women often parallels major historical events, from prosperity to hardship, and especially during wartime—from the heroic Hai Bat Trung of Vietnam’s ancient past to Disney’s largely fictional Mulan! Using the marker of the life of Helen Richey, it is possible to the contributions of the Women Army Air Force Service Pilots (WASPs) during World War II. Using these resources, you can examine

portrayals of women in World War II posters (and newsreels) and compare and contrast them with personal recollections of the WASPs. You can also gain an understanding of the importance of the WASP program, which enhanced careers for women in aviation.

Research via URLs:

McKeesport Historical Center http://www.mckeesportheritage.org/helen_richey

<http://www.post-gazette.com/pg/09329/1016089-55.stm>

<http://www.yorkblog.com/yorktownsquare/2010/11/world-war-ii-pilot.html>

<http://explorepahistory.com/hmarker.php?markerId=960> (Do not miss video interview with another pilot)

<http://explorepahistory.com/storydetails.php?storyId=31&chapter=1> (searchable by county)

<http://www.docstoc.com/docs/2317823/THE-STORY-OF-HELEN-RICHEY>

<http://edsitement.neh.gov/lesson-plan/women-aviators-world-war-ii-fly-girls>

<http://wwii-women-pilots.org/classlists/docs/HRichey43-5-Weigand.pdf>

<http://explorepahistory.com/storydetails.php?storyId=31&chapter=1>

Marker Site Visit background information: <http://explorepahistory.com/hmarker.php?markerId=960>

In 1934, Richey, of McKeesport, became the 1st woman to pilot a commercial airliner. Discriminated against because she was a woman, she resigned within a year and went on to become the 1st woman licensed instructor by the Civil Aeronautics Authority; and in WWII, the commandant of the American wing, British Air Transport Auxiliary; member of the Women's Army Airforce Service Pilots; and Major by war's end.

Behind the Marker: <http://explorepahistory.com/hmarker.php?markerId=960>



On December 31, 1934, Helen Richey became the first woman to pilot a commercial...

Credit: Image donated by Corbis-Bettmann

Famed aviatrix Helen Richey exemplifies the involvement of American women in World War II, with all the successes and failures attendant to their participation. When war broke out in Europe in 1939, Richey was already an experienced pilot and holder of several world records. Indeed, in the 1930s she had been one of the nation's most famous female pilots, a young woman with Hollywood looks who set world records for women, and raced with Amelia Earhart. In 1935 Richey had become the first woman to pilot a commercial airline, but was quickly forced out of the cockpit by systematic harassment of male pilots, who considered the new field of commercial aviation their own domain. Job shortages during the Great Depression had discouraged women from working outside the home; however, times were changing. First Lady Eleanor Roosevelt and Secretary of

Labor Frances Perkins showed that women could be accepted as decision makers by a male-dominated world.



During World War II, 21,887 women from the Commonwealth served in the armed...
Credit: Courtesy of Temple University, Urban Archives, Philadelphia, Pa.

As American industries geared up for war production, employment became more plentiful. This, coupled with the 1940 draft, slowly but surely led to manpower shortages in several areas of the country. Women began to leave their homes and enter the work world into jobs previously held only by men. Female pilots like Richey longed to serve their country, but the American military was not yet ready for women in uniform. In 1940, Richey broke another barrier, becoming the first woman licensed by the Civil Aeronautics Authority as an aviation instructor. That same year, Jacqueline Cochran, another hotshot female pilot who held world records against men as well as women, repeatedly suggested to General Henry H. "Hap" Arnold, commander of the Army Air Corps, that women pilots could help the expanding air corps. Reluctant to use women, Arnold advised Cochran to gather other female pilots and go to England, where the Royal Air Force was already using women as shuttle pilots in its the Air Transport Auxiliary to fly new aircraft from the factories to air bases. "Hap" Arnold thought that Jackie Cochran and her fellow pilots might gain some experience there while helping our ally fight the Nazis.



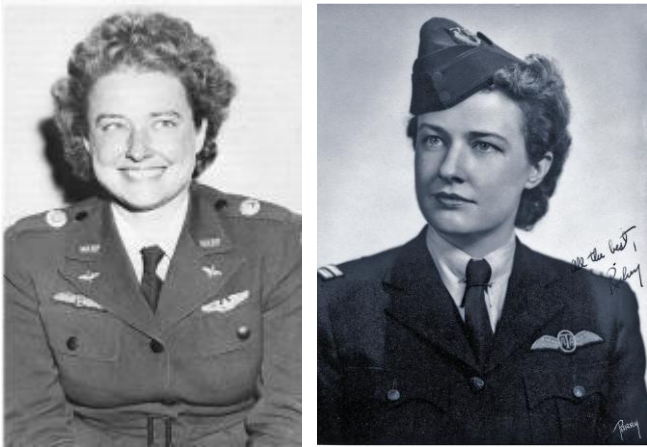
At the height of World War II, women accounted for one of every four war workers....
Credit: Courtesy of Temple University, Urban Archives, Philadelphia, Pa.

In 1942, Helen Richey was one of the first American women to go to England. When she came home after more than a year's service, Richey joined the new Women's Air force Service Pilots (WASP), a group of female pilots selected to ferry newly built military aircraft from factories to air bases. WASP pilots were originally restricted to flying smaller aircraft, but gradually, as demand for ferrying grew, they piloted big bombers, such as the B-17. Some groups of WASP pilots also flew aircraft that towed targets for antiaircraft practice, sometimes a

dangerous assignment. By the time the WASP corps was disbanded in late 1944, more than 1,000 women pilots had performed valuable services for the United States.

Women also entered the other branches of the United States military, serving in the Women's Army Corps (WAC), the Navy (WAVES-Women Accepted for Volunteer Emergency Service), the Marine Corps Women's Reserves, and the Coast Guard (SPARS). The United States prohibited women in the military from entering combat, but thousands also served as military nurses, some of whom were killed while attending to their duties near the front lines.

The greatest contribution by women during World War II was at home in the work force. Millions of American men entered the Armed Forces after American entry into the war in December 1941. Faced with critical labor shortages, the War Manpower Commission directed that defense industries "fully utilize ... the largest and potentially the finest single source of labor available today—the vast reserve of women power." Women generally received lesser pay than male workers, many of whom resented their presence on the job.



As a member of the Women's Airforce Service Pilots (WASP) during World War II,...
Credit: Courtesy Aviation Museum of Kentucky, George Gumbert

Represented by the ubiquitous Rosie the Riveter, working women learned skills and trades previously denied them, freed up men to fight, and kept factories producing at full speed. Pennsylvania, with its heavy concentration of defense industries, became a major employer of women. Here, they worked in factories assembling guns, bomb fuses, airplane wings, and other war materiel. They drove trucks and heavy equipment, manned the railroads, and welded steel in shipyards.

Close to 6.5 million women went to work during World War II; by 1944, they represented about 36 percent of the entire civilian force. After the end of the war, employers quickly laid them off to make room for the returning veterans. Most accepted the loss of their new jobs and economic independence, but others found the loss of opportunities difficult. Depressed by her inability to find employment as a pilot, Helen Richey committed suicide in 1947. For other women, though, the war provided the impetus to increase their struggle for equal rights. In 1943, Max Lerner, a well-known New York journalist, recognized the changes that were taking place. "[W]hen the classic work on the history of women is written," he penned, "the biggest force for change in their lives will turn out to have been war. Curiously, war produces more dislocations in the lives of women who stay at home than of men who go off to fight."

See also:

Diane B. Reed, "Wanted: Women to Meet the Wartime Challenge! A Pictorial Essay,"

E. Template for a Memorial

A Visit to a Vietnam Memorial

Include names, addresses and phone numbers of architect or designer, and who maintains the memorial. Be sure to get names and addresses and phone for contacts that can explain who the memorial came to be, give directions on how to get there and who maintains it.

Find out what inspired the building of the memorial. Was it an individual? A group? Who What, Why? If memorial has more than one function (Korea and Vietnam) discuss who built the Vietnam component and why? Sometimes Viet Nam veterans built a memorial to all wars so they can memorialize their war without neglecting other veterans. Place the memorial/interviews in context of the global debate over conflict or conflicts.

Contact at least by phone, two social studies teachers at a local high school or college and ask if they have ever taken a class to the memorial.

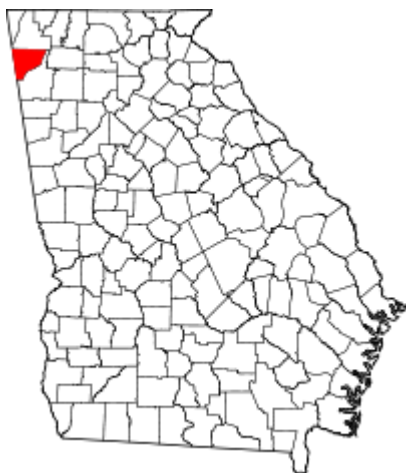
Collect or make copies of any materials related to the dedication/memorial, especially local newspaper reports covering the dedication.

Take photographs of the memorial. Take several shots that show 1) the setting 2) the look of it as you would be expected to view it. Also photograph the rear and sides of the memorial. Photograph and place in your paper any wording on the memorial.

Place a hardcopy of your essay and Xeroxed or original photos in a three-ringed binder along with one diskette with your essay on it and one for your photocells.

Engage visitors who are visiting the memorial, respecting their privacy but gauging their likelihood of appreciating the opportunity of sharing their thoughts at visiting the site.

CHATTOOGA COUNTY VIETNAM MEMORIAL



On November 11, 1989, Veteran's Day, a memorial to the thirteen brave men that gave their lives for their country in Vietnam was erected in Chattooga County. The Memorial includes KIA's and MIA's from

World War II, the Korean War, and Vietnam. The memorial is located at the Chattooga County Memorial Home in Pennville, Georgia. The "Doughboy," a memorial to the county's KIA's during World War I, erected in 1934, guards the other Memorial.

American Legion Post 128, and Veterans of Foreign Wars Post 6688 sponsored the memorial and its dedication. The two posts elected a committee to plan and develop such a monument. The end product is the memorial we see today.

Its dedication ceremony attracted tremendous attention. It received local attention and cooperation from Chattooga High School, and the Mayor of Summerville was its Master of Ceremonies. It also received state recognition from the local National Guard Company and from Brig. Gen. Jack Branford of the Georgia Army National Guard. More than 400 people attended the dedication ceremony on November 11, 1989.

The memorial included three wars with each war being separated by the title of each war. After the war the names of soldiers from Chattooga County that paid the ultimate price are listed. I did not attend the dedication ceremony but have visited the Memorial twice. I was unaware of the Vietnam Memorial in the County before I began this class. I did know about the "Doughboy" memorial at the Memorial Home. I decided to go and see for myself if the Memorial was just for World War I and II or if they had a separate memorial for Vietnam. As you can see from the photographs, both memorials are very nice. The area surrounding the memorials is well kept and more improvements are planned to add to their splendor.

I discussed the Vietnam Memorial located in Chattooga County with three different teachers at Chattooga High School. The teachers that I spoke with were Steve Peppers, Steve Hays, and Ron Williams. Mr. Peppers now teaches Economics and no longer covers the war in his classes. However, he was aware of the Memorial. When the Memorial was dedicated, he took his class to the ceremony. Mr. Williams also allowed his classes to witness the dedication ceremony. He teaches U.S. History and includes the Vietnam War as a part of his yearly curriculum. He occasionally uses the Memorial in his lectures. When asked his opinion of the war, Mr. Williams said, "The government was too involved and tried to fight the war as they wanted." He believes that the soldiers of the Vietnam War are heroes and that the Memorial is an excellent way of honoring them.

The other U.S. History teacher I spoke with was Mr. Steve Hays. He was unaware of the Memorial's existence in the County. When asked his feelings about the war he responded, "There was a reason behind it." He felt that we had to fight communism. If it had not been with Vietnam, it would have been some place else. He also believed the government was too involved in the conflict.

After taking pictures and researching the monument I interviewed three veterans from Chattooga County. Two were at the Memorial Home the day I took the pictures and the other was interviewed at a later time. All three were glad to see my interest in the memorial but were unwilling to talk about many events that happened in the war.

The first Veteran I interviewed was Louis Haney, the commander of the local VFW Post. Mr. Haney reached the rank of E-5 and served two tours in Vietnam. His MOS was a 35-31, or truck driver, but he said he never drove a truck in Vietnam. I then asked Mr. Haney if he patrolled a lot in Vietnam and he said, "Yes, we patrolled a good bit, but I occupied a mortar position most of the time." He said that during his first tour he felt he had a purpose but during his second tour he couldn't do his job. Mr. Haney believed we should never have lost the war. He said, "We should have gone all out from start to finish." He believed that too many restraints put on the military by the Government kept them from doing their job. That is all the information I received from Mr. Haney because he said, "I don't like to talk about it because it brings back bad memories." Although he was hesitant when talking to me he said he would talk to someone that had served in Vietnam. I also asked

Mr. Haney how he felt about the Memorial. He responded with, "It's great, but they've not done enough," meaning America in general has not done enough to honor the ones that served.

While at the Memorial Home, I also interviewed Mr. Stan Brown. Mr. Brown retired from the Army with the rank of SFC. He served one tour in Vietnam as a 76P (supply). He is a proud graduate from Jungle Training in Panama, the Pathfinder Course, and a recon specialist. Mr. Brown arrived early in 1965 before the big buildup. He said, "When I first arrived, we could not have ammo. We stayed in tent cities and would take fire every night." In these tent compounds they would have twelve-hour shifts on guard duty. I asked SFC (Retired) Brown how he felt about the war and his overall views while he was there. He said, "I was glad to serve and I felt we had a purpose." He also stated that it was confusing because you didn't know who Viet Cong were. When asked how he felt toward the government during the conflict he replied, "They would not let us do what we needed to do; it was a "people's war" and not a "military war." Mr. Brown does not like talking about his experiences with just anyone but gladly talks to Veterans that are having problems. His job in the post is "A Vet that helps Vets." Even though he dreams about it every now and then he says he handles it well.

The last Veteran I talked with was Mr. Herb Skelton. Mr. Skelton served one tour in Vietnam as an 11B (Infantry) and was an M-60 machine gunner. He reached the rank of E-5 but said "It wasn't hard to get because so many were dying." He said, "I would have done anything to avoid it, but I knew I had to go and serve my country." Mr. Skelton said the hardest part about Vietnam was seeing so many of your comrade's fall next to you. He said that it was hard to get attached to anyone because you never knew how long he or she would be around. When asked how he felt about the war he responded, "I would like to see it called a war and not a conflict, Even though it was not a declared war doesn't mean it wasn't treated like one. I believe this would give Veterans and KIA's more honor and respect." He also believed the way the conflict was fought hurt Patriotism. Mr. Skelton believes the memorial is a good thing but says, "It's only recognized by a few, the ones that know appreciate it, but most don't even know it's here in the County."

In addition to the Veterans I also interviewed civilians from the county. The first local individual I interviewed was Ollie Cash. Mrs. Cash was in her 40's at the time of the war and was teaching third grade. When asked about her feelings on the war she replied with "It should have never happened, it never was a declared War so we should have never went." Mrs. Cash also said she didn't watch the war on T.V. and didn't really keep up with soldiers going from the county, or the War it self. Although she didn't really keep up with it she "did feel sorry for the guys going because you never knew where they were." In reference to this she kept talking about WW II and the front lines. She also talked about the differences in attitudes on each War. I then asked her the lasting impression she has of Vietnam. She answered with "It was a political War that didn't solve anything." Mrs. Cash did know about the Memorial in the county and believes that it and others like it are a good thing.

Mrs. Carol Thomason was in her middle to late teens at the time of the War. She grew up here in the county and saw a lot of her friends go off to Vietnam. Because she had many friends fighting in the War, she supported it and watched it on TV every night. When asked her impression about the War and how she felt about it she responded by saying "we should have turned the military lose and went all out." Mrs. Thomason also believed that the War was too political. I also asked Mrs. Thomason about her feelings toward the War today and she was "not sure if it should have been fought." Mrs. Thomason did know about the Vietnam Memorial in the county and feels that it is very nice and she is glad we have one.

All but one of the persons I talked with knew about the Memorial. This actually surprised me but I was glad to see that this many people were aware of it. I learned a lot by researching the local Memorial and really enjoyed it. Not only did I discover a nice Vietnam Memorial within the county I live, but I also got to see and hear others views on the War. Although many of the people I interviewed shared some opinions there were also many personal aspects. I believe that the Memorials to all those that died for our country is very important for us as a nation in paying our last respects to these brave men.

IV. Exploring World History Themes in Western Pennsylvania

A. Big History



WORLD HISTORY THEME

What is Big History? Big History looks at the past on all time scales, from the [Big Bang](#) to [modernity](#), seeking out common themes and patterns. It uses a multi-disciplinary approach from the latest findings, such as biology, astronomy, geology, climatology, prehistory, archeology, anthropology, cosmology, natural history, and population and environmental studies. Big History arose from a desire to go beyond the specialized and self-contained fields that emerged in the 20th century and grasp history as a whole, looking for common themes across the entire time scale of history. Conventionally, the study of history is typically limited to the written word and the systematic narrative and research of past events as relating to the human race; yet this only encompasses the past 5,000 years or so and leaves out the vast majority of history and all events in time, in relation to humanity.

--http://en.wikipedia.org/wiki/Big_History

1. A Walk Through the Ice Age



Location: Multiple Counties

Adapted from: <http://www.dcnr.state.pa.us/topogeo/field/glacial.aspx>

Introduction

"Have you heard the story of the Ice Age, a time when large sheets of moving ice (glaciers) blanketed the northern half of North America? Unbelievable though it may seem, half of our continent was once buried beneath thousands of feet of ice. The northwestern and northeastern corners of Pennsylvania, separated by the Salamanca Reentrant in New York, have been glaciated in the geologically recent past. Northwestern Pennsylvania was glaciated by the Erie lobe and Grand River sublobe coming out of the north (see sketch below), while northeastern Pennsylvania felt the effects of the Ontario lobe glacier coming from the northeast. The style of glaciation was quite different in the two corners, as are the resulting deposits.

Glaciation in northwestern Pennsylvania was similar to that in the Midwest, although the extent of glaciation on the Allegheny Plateau was less extensive and the parallel moraines closer together than in the Midwest. However, similar to the Midwest, there are multiple, extensive till sheets preserved, suggesting that depositional processes dominated glaciation in northwestern Pennsylvania. Sections frequently expose multiple layers of deposits preserved from several glacial advances- a vertical stratigraphy. Many far-traveled clasts of igneous and metamorphic rock from the Canadian Shield, foreign to the bedrock of the area, are found in the tills and glaciofluvial deposits. The glacier crossed limestone and dolostone (carbonate) bedrock in the Erie basin, as well as on the Plateau, resulting in the deposition of sediments containing a relatively large proportion of carbonate minerals. Multiple parallel end moraines created by numerous minor retreats and re-advances extend across northwestern Pennsylvania. In contrast, glaciation in northeastern Pennsylvania was more similar to glaciation in New England. Presumably, due to the more rugged topography in northeastern than in northwestern Pennsylvania, erosion was a more dominant process. Each glaciation effectively eroded existing glacial deposits from earlier glaciations. As a result, a vertical stratigraphy is rarely, if ever found. The erosive nature of the glaciers also resulted in deposits with a very high percentage of locally-derived clasts and a paucity of far-traveled clasts from the Canadian Shield. The lack of carbonate bedrock crossed by the glacier also resulted in the deposition of sediments with a very low carbonate content. A single end moraine at the margin of the late Wisconsinan deposits is discontinuous, except for where it extends across the Pocono Plateau.

- To learn more about glaciers in Pennsylvania, see our Education Series 6 publication, [Pennsylvania and the Ice Age](#).
- For a page-sized map of how far glaciers advanced into Pennsylvania, see Map 59, [Glacial Deposits of Pennsylvania](#).
- For detailed information about glaciation in northwestern Pennsylvania, see our [General Geology Report 32](#).

**You will need the Acrobat Reader 6.0 or later to successfully view/print some information. This program can be downloaded to your computer for free; simply click on the "Get Acrobat Reader" button at right to download now*

[Selected Survey publications and articles on glacial geology](#), [Glacial Photo Gallery](#)

Geologic mapping of surficial glacial deposits is ongoing in Pennsylvania. For more information, contact [Gary Fleege](#) at 717-702-2045. To learn more about glaciers in *Pennsylvania*, see our Education Series 6 ...
www.dcnr.state.pa.us/topogeo/field/glacial.aspx

1. Lesson Plan on Plate Tectonics

Strands: Earth Sciences, Physical Characteristics of Places and Regions

Standard Statements:

3.5.4 A; 3.5.4 B; 7.2.6A; 7.2.6 B

Content Objectives--For this activity, students will:

1. Demonstrate plate tectonics through a “hands on” experiment.
2. Create a model of sedimentary rock layers of Pennsylvania.
3. Demonstrate the effects of erosion.
4. Describe the correlation between their model and the map of Surficial Materials of Pennsylvania.
5. Describe the correlation between their model and ridges as shown on the DSR map.
6. Demonstrate the effect of the collisions of tectonic plates on layers of rock.

Assessment Strategies:

Students should answer these two questions during small group or whole class discussions:

“What are the most important things you learned today?”

“Where did our Pennsylvania ridges come from?”

Suggested Level: Grades 4-6

Standards Category:

- Science and Technology
- Geography

Materials-Each student will need:

- ¼ lb. plasticene for each student (5 different colors needed) and a sheet of waxed paper for each group
- Quart size Ziploc freezer bags for each student (a few extras may be helpful)

Each group will need:

- Digital Shaded-Relief Map of Pennsylvania (**DSR** map)
- Land Cover Map of Pennsylvania (**LC** map)
- Map 64 - Surficial Materials of Pennsylvania (available from PaGS)
- Overlays created in last lesson
- Marking pens
- Large paper clip
- Overheads showing the earth at different stages throughout time (available on the at <http://www.scotese.com/earth.htm>).

Instructional Strategies:

- Whole class – (may need 2 class periods to complete this lesson.)

- Cooperative groups

Procedure:

This activity will provide the students with a “hands-on” model of the topography of Pennsylvania. The students will construct layers of earth out of various colors of plasticene to model layering of rock types. They will distort these layers to model the collision between the continents. Students will cut away the centers to model erosion of the ridges and observe the different colored layers representing the different layers of rocks. Students will match this model to the ridges shown on the map of “Surficial Materials of Pennsylvania” and finally to the “Digital Shaded-Relief Map of Pennsylvania.” (For more information on tectonic plates, see background information.)

1. Distribute the clay so that each group member has a DIFFERENT color of clay. It is best to have a minimum of five colors per group. Place the clay inside a 1-quart freezer bag. Take time for the students to flatten the clay so it is as thin as possible. This will take 15-20 minutes to complete. Do not remove the clay from the bag until instructed to do so.
2. The teacher should introduce the lesson by reviewing how mountains were made. Explain that the earth is made of a hot core with solid rock floating on top. Earthquake zones and volcanoes should be shown on maps. (NOTE: Two possible websites for background information and illustrations can be found at: <http://pubs.usgs.gov/publications/text/zones.html> and <http://livescience.com/forcesofnature/>.)
3. Pennsylvania has these zones also. Class discussion should center on how the earth’s plates move and change creating earthquakes or volcanoes. Using overheads showing the earth at different stages throughout time, follow the movement of the continents as we know them. Pay close attention to the time involved with the movement! The students must realize this happened over tens of millions of years. As the North American plate moves across the equator, discuss how the climate will change. As Pennsylvania crosses the equator, this area became a tropical rainforest. This tropical rainforest became the layer of carbon that was compressed into coal. If the North American plate had not moved across the equator, we would never have had the climatic conditions that eventually produced the coal we now find in Pennsylvania. (For more information about coal formation, see background information.)
4. As you go through the ages illustrated by the overheads, lay down one color of clay at a time building a single “continent” of rock layers. (This “continent” should be built on top of waxed paper to make the folding of the continent easier.) Once all the layers of clay have been applied, each group should model the North American continent colliding with the African continent to compress the clay into mountain ridges. Try to create two good ridges in your mountain range. The students should note that just like the earth, the layers of clay may break.
5. Using a large paper clip (which has been unbent), scoop out the mountain top along one fold to show erosion. This usually happens at fracture points that run perpendicular to the direction of the mountain ridges. It should be deep but as narrow as possible to allow the students to view the different layers of “rock.” One mountain ridge should be scooped to the lowest color. The other mountain ridge should not be as deep for comparison. The students should note that the layers stretch at the top of the ridges and compress at the bottom distorting the layer of rock. As most students think of rock as “unbendable,” they will be surprised to see the effects of pressure.
6. Introduce the students to the “Surficial Features Map” (PaGS Map 64) and discuss how their model is the same as this map. Discuss the varying colors and their arrangements. How were the layers created?

The student groups should SAVE their model mountains in labeled plastic bags or by wrapping them in wax paper. They will need them again in activity 6.

CLOSING: Summarize that our Pennsylvania mountains were created many millions of years ago when our North American Plate collided with the African Plate. Evidence to support this theory includes the presence of

the same rock formations on both continental coasts. Geologists also know that folded rock layers forming our mountains were originally deposited as sediments on the ocean floor. To further support this theory, we find marine fossils in our folded mountains.

Similar Sites for Field Trips and Virtual Visits

There are many sites in Pennsylvania that you can visit to view geologic features and to learn about the [geologic heritage](#) of our state. These sites include State Parks where exceptional geologic features are preserved. To learn about geologic features at Pennsylvania's State Parks, click on [Trail of Geology](#), which includes guides to selected state parks. Our [photo gallery](#) is another way to view some scenic and unique geologic features of the state. Specific guidebooks and virtual field trips that highlight areas of Pennsylvania are listed below.

Field Guidebooks and Virtual Tours Take a geologic tour of [Moraine and McConnells Mill State Parks Geologic Guide](#), Butler and Lawrence Counties, Pennsylvania.

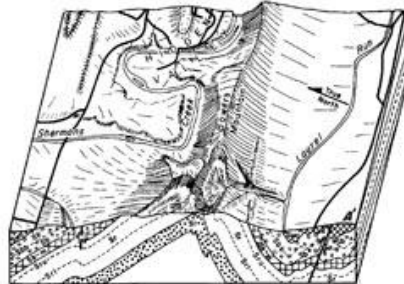


Peruse the [field trip guidebook](#) of the Trenton and Black River carbonates in Blair and Huntingdon counties, Pennsylvania. The Union Furnace Quarry (photo right) is included on this field trip.



[Click on the image for more information.](#)

A portion of Perry County geology is described in [G 30 – The Geology of the Hidden Valley Boy Scout Camp Area, Perry County, Pennsylvania](#)* (2.5 MB). For information on ordering paper copies of G 30, see our [General Geology](#) web page at our Publications section.



Related resources:

<http://sos.noaa.gov/datasets/Land/paleo.html>

<http://www.lessonplanet.com/search?keywords=earths+geological+features&media=worksheets>

<http://www.lessoncorner.com/search?page=18&q=Geologic+Time>

Animated survey of Pennsylvania plate tectonics:

http://faculty.kutztown.edu/friehauf/Pennsylvania_history/0250_Pennsylvania_tectonic_history.html

Classroom based lesson plans from the Pennsylvania plate tectonics)

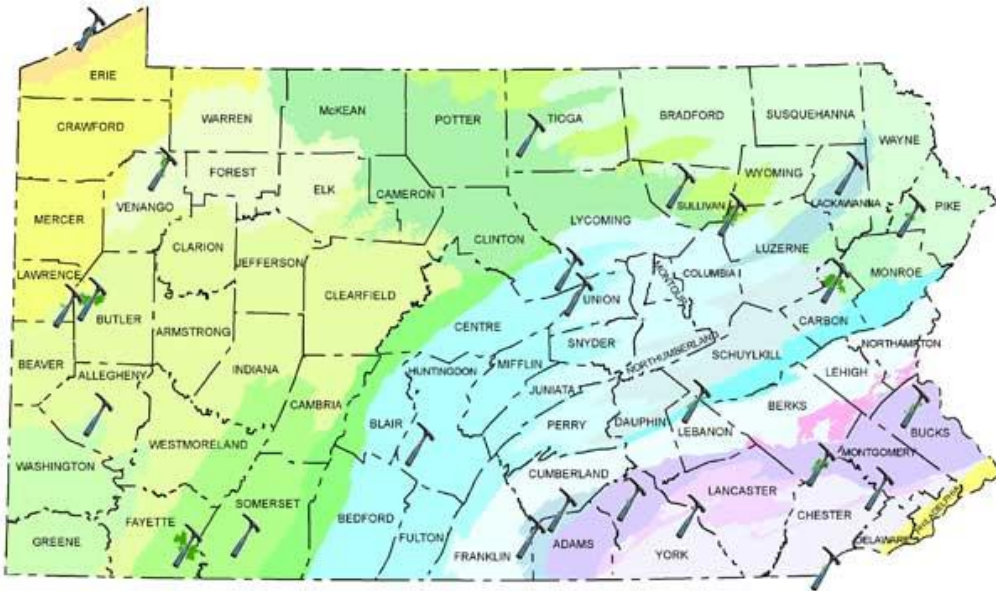
<http://www.dcnr.state.pa.us/topogeo/classroom/teachers/mapslpintro.aspx>

Geological Survey

<http://www.dcnr.state.pa.us/topogeo/classroom/teachers/elem3.aspx>

<http://www.dcnr.state.pa.us/topogeo/classroom/teachers/elem4>

2. Further Adventures in Geologic Time: Pennsylvania's Geology Trail



Site Visit Stops along the Geology Trail

Location: multiple counties.

Adapted from <http://www.dcnr.state.pa.us/topogeo/parkguides/trail.aspx>

Geologic features abound in Pennsylvania, and are especially visible in state and other parks. The Trail of Geology park guides are available as PDF files.* Click on the rock hammers on the map or use the list below to access them.

- [Trough State Park \(PG 1\)](#) Huntingdon County, Ridge and Valley province—Ice Mine and Balanced Rock erosional remnant.
- [Hickory Run State Park \(PG 2\)](#) Carbon County, on the Pocono Plateau—Hickory Run Boulder Field, created by periglacial activity during the Ice Age.
- [Archbald State Park \(PG 3\)](#) Northeast of Scranton in Lackawanna County—the world's largest pothole, discovered in 1884.
- [Moraine and McConnells Mill State Parks \(PG 4; also includes the former PG 9\)](#) Butler and Lawrence Counties—glacial lakes and drainage changes.
- [Moraine and McConnells Mill State Parks Addendum \(PG 4A\)](#) Addendum to Park Guide 4—Muddy Creek Oil Field.
- [Leonard Harrison and Colton Point State Parks \(PG 5\)](#) Tioga County, north-central Pennsylvania—the Grand Canyon of Pennsylvania.
- [French Creek State Park \(PG 6\)](#) Berks and Chester Counties—Piedmont rocks and the Hopewell Furnace.
- [Ohiopyle State Park \(PG 7\)](#) Along the Youghiogheny River in Fayette County—waterfalls, Devonian-age rocks, and the Laurel Hill anticline.
- [Valley Forge National Historical Park \(PG 8\)](#) Montgomery and Chester Counties—Port Kennedy quarry and Valley Creek Gorge.
- [Gifford Pinchot State Park \(PG 10\)](#) York County—diabase (molten, liquid rock).
- [Ravensburg State Park \(PG 11\)](#) Clinton County—Rocky Gorge, Castle Rocks, and Big Rock Spring.
- [Worlds End State Park \(PG 12\)](#) Sullivan County—Loyalsock Gorge, fossils, and the Rock Garden.

- [Ricketts Glen State Park \(PG 13\)](#) Luzerne, Sullivan, and Columbia Counties—the Red Rock, Midway Crevasse, and The Glens, which has 25 distinct waterfalls.
- [Nockamixon State Park \(PG 14\)](#) Bucks County—Sentinel Rock, Tohickon quarry, joints, ledges, and boulders.
- [Caledonia and Pine Grove Furnace State Parks \(PG 15\)](#) Cumberland, Adams, and Franklin Counties—the iron ore industry, faults, and the Tomstown Dolomite.
- [Swatara State Park \(PG 16\)](#) Lebanon and Schuylkill Counties—includes a site where you may collect fossils, including (if you are lucky) *Phacops rana*, the [State Fossil](#).
- [Samuel S. Lewis State Park \(PG 17\)](#) York County—Chickies Rock, Mt. Pisgah, and the Lower Susquehanna Valley.
- [Promised Land State Park \(PG 18\)](#) Pike County, on the Pocono Plateau—ancient rivers and ages of ice.
- [Raymond B. Winter State Park \(PG 19\)](#) Union County—scenery, rocks, and springs in eastern Brush Valley.
- [White Clay Creek Preserve \(PG 20\)](#) Chester County, Pennsylvania, and New Castle County, Delaware—the Wissahickon Formation and pegmatites.
- [Presque Isle State Park \(PG 21\)](#) Erie County—evidence of past and present geologic processes.
- [Oil Creek State Park \(PG 22\)](#) The geologic heritage of Pennsylvania's oil region, and the geologic history of Oil Creek.
- [Lehigh Gorge State Park](#) Open-File Report 98–03, Rocks and ruins of the “Upper Grand”—An illustrated trail guide to the geology and historical archeology of Lehigh Gorge State Park.
- [Point State Park](#) Older brochure, prepared for the [Pittsburgh Geological Society](#) by the University of Pittsburgh—features the structure of “The Point.”

Trail Guide: [Garrett-to-Rockwood section of the Allegheny Highlands Trail](#)—Prepared by the Pennsylvania Geological Survey in cooperation with the Somerset County Rails-to-Trails Association and the Somerset County Parks and Recreation Board—diverse geologic topics (formation of rock units, structure and age of rocks, types of fossils, and more) along a 7-mile section of the Allegheny Highlands Trail in Somerset County.

Educational Resources: Most of the files on this page are in Adobe Portable Document Format (PDF).*

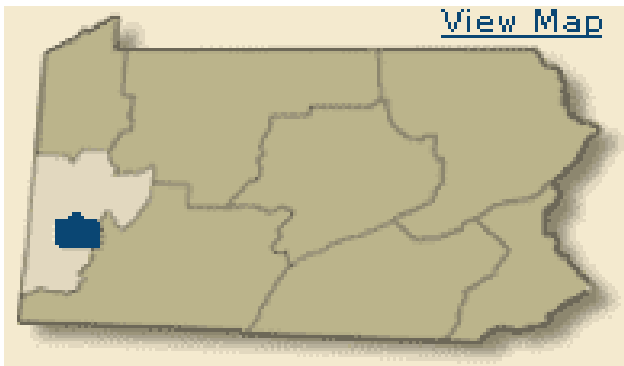
[Rocks and Minerals of Pennsylvania](#) ES 1, [Common Fossils of Pennsylvania](#) ES 2, [The Geology of Pennsylvania's Groundwater](#) ES 3, [The Geological Story of Pennsylvania](#) ES 4, [Geology and the Gettysburg Campaign](#) ES 5, [Pennsylvania and the Ice Age](#) ES 6, [Coal in Pennsylvania](#) ES 7, [Oil and Gas in Pennsylvania](#) ES 8, [Landslides in Pennsylvania](#) ES 9, [Earthquake Hazard in Pennsylvania](#) ES 10, [Sinkholes in Pennsylvania](#) ES 11, [The Nonfuel Mineral Resources of Pennsylvania](#) ES 12, [Reading and Using Maps](#) ES 13, [Environmental Geology for Land-Use Planning](#) EG 2

Page-Sized Maps, most available in classroom quantities. Contact [Jody Zipperer](#) 717–702–2073 to order copies.

[Geologic Map of Pennsylvania](#) Map 7, [Oil and Gas Fields of Pennsylvania](#) Map 10, [Distribution of Pennsylvania Coals](#) Map 11, [Physiographic Provinces of Pennsylvania](#) Map 13, [Limestone and Dolomite Distribution in Pennsylvania](#) Map 15, [Glacial Deposits of Pennsylvania](#) Map 59, [Earthquake Epicenter Map](#)

Other Sources of Information: [Pennsylvania State Museum — Hall of Paleontology and Geology](#) and [Carnegie Museum of Natural History](#). See also: <http://www.chatham.edu/pti/curriculum/units/2003/Real.pdf>. **This is a course on the Hydrology of the Three Rivers area for analytically impaired students.**

3. The Fourth River



Site Visit: The Point Fountain

Location: Pittsburgh, Allegheny Country

Adapted from:

<http://www.frsoft.com/pages/InfoPage.aspx?PageID=7>

http://www.carnegielibrary.org/exhibit/neighborhoods/point/point_n78.html

http://www.clpgh.org/exhibit/neighborhoods/point/point_n78.html

The Allegheny and the Monongahela Rivers meet at the Point and form the mighty Ohio River. At the junction of the river, in the historic and geographic birthplace of the Ohio Valley, a fountain was built to symbolize the meeting of the waters and the rivers' part in the settlement and economic growth of America's heartland. The fountain has a jet capable of rising 150 feet, and is the trademark of Pittsburgh. It is also the largest fountain in America.

Unknown to most, the water in the fountain of Point State Park comes not from one of the visible "Three Rivers" but from a little known and unnamed fourth river of Pittsburgh. The fountain source is a subterranean river about 54 feet below the surface at "The Point." An underground glacial stream, it is considered a never-ending source of water for the fountain. Called the Wisconsin Glacial Flow by geologists, it was formed by the Wisconsin ice sheet that covered much of the Northern United States during the Ice Age of 70,000 years ago.

Today it flows south from beneath the Great Lakes and under Western Pennsylvania; at Pittsburgh's Point it flows due south, contrary to the Three Rivers. The water is fresh and pure, 55 degrees, with no bacteriological count, and is actually the source of drinking water for some of downtown Pittsburgh. Pittsburgh's "underground river" is called an "aquifer"—but it differs from other aquifers in that most of them are irregular and widespread, and do not follow a channel—making it more like a true river. . .

[From Carnegie Magazine, Summer 1985 as derived from Thomas E. Morgan's essay, "The Plume of Pittsburgh"]

No other large American city has a spectacular fountain as its symbol and visual focal point. St. Louis has its arch; Philadelphia, Independence Hall; New York, the Statue of Liberty; San Francisco, the Golden Gate Bridge; and Seattle, the Space Needle. The one European city boasting a fine fountain as a main attraction is Geneva, Switzerland, where a jet of water rises out of Lake Geneva to perhaps 400 feet, the highest such fountain in the world. But the fountain in Pittsburgh is conceived as one of the most dramatic displays of water to be seen anywhere. It is unique in its use of great jets of water, its computer-controlled water height, its changes in illumination at night, and in its building materials. However, it's most remarkable and least understood feature is its construction. It stands anchored at the confluence of the three rivers in such a way as to keep it "down," resisting the surrounding pressure of the river waters to force it "up," and it draws its water supply not from the visible waters which pass by it, but from [an unnamed fourth river, subterranean](#), passing from the north to the south 54 feet below the surface of the Pittsburgh Point ...

B. Earliest Human Settlements



WORLD HISTORY THEME

Two other strong themes in world history are closely related are the diffusion of peoples and evolution of human technology. The former is particularly rich as new advances in our understanding of the spread of humans to and across the Western Hemisphere are made with great frequency, while the latter is key to understanding of that diffusion as it is [technologies](#) that enable humans to travel to places they could not otherwise go. Geological and archeological research indicates that humans first colonized the Americas with the use of watercraft along the southern coast of the Bering Land Bridge and the western coast of the Americas. Early dates from a number of archeological sites in the Americas indicate human colonization of the Americas began prior to ca. 13,000 BP. A review of archeological sites in eastern Beringia identifies several distinctive cultural traditions which had developed by 11,000–10,000 BP. Geological, biological, linguistic evidence, and dated human skeletal remains all suggest human occupation of the Americas prior to ca. 11,500 BP. Glacial geology indicates colonization could have begun ca. 14,000–13,000 BP along the western coasts of the Americas and ended about 5000 BP with deglaciation of the Canadian eastern Arctic and coastal Greenland. The use of watercraft and coastal navigation prior to 11,000 BP are inferentially demonstrated. A model for early coastal and subsequent inland colonization of the Americas along large ecological zones best fits current geologic and archeological data.

Introduction:

While some indigenous peoples of the Americas were historically [hunter-gatherers](#), many practiced [aquaculture](#) and [agriculture](#). The impact of their agricultural endowment to the world is a testament to their time and work in reshaping, taming, and cultivating the flora indigenous to the Americas. Some societies depended heavily on agriculture while others practiced a mix of farming, hunting, and gathering. In some regions the indigenous peoples created monumental architecture, large-scale organized cities, [chiefdoms](#), [state](#), and [empires](#). Many parts of the Americas are still populated by indigenous Americans; some countries have [sizable populations](#), such as [Bolivia](#), [Peru](#), [Mexico](#), [Guatemala](#), [Colombia](#), and [Ecuador](#). At least a thousand different [indigenous languages](#) are spoken in the Americas. Some, such as [Quechua languages](#), [Aymara](#), [Guaraní](#), [Mayan languages](#), and [Nahuatl](#), count their speakers in millions. Many also maintain aspects of indigenous cultural practices to varying degrees, including religion, [social organization](#) and subsistence practices. Some indigenous peoples still live in relative isolation from [Western](#) society, and a few are still counted as [uncontacted peoples](#).

1. Meadowrock Rockshelter



Adapted from:

<http://explorepahistory.com/hmarker.php?markerId=732>

<http://www.heinzhistorycenter.org/meadowcroft.aspx>

<http://archaeology.about.com/od/mterms/qt/meadowcroft.htm>

<http://mai.mercyhurst.edu/academics/archaeology-anthropology/meadowcroft-rockshelter/>

http://en.wikipedia.org/wiki/Indigenous_peoples_of_the_Americas

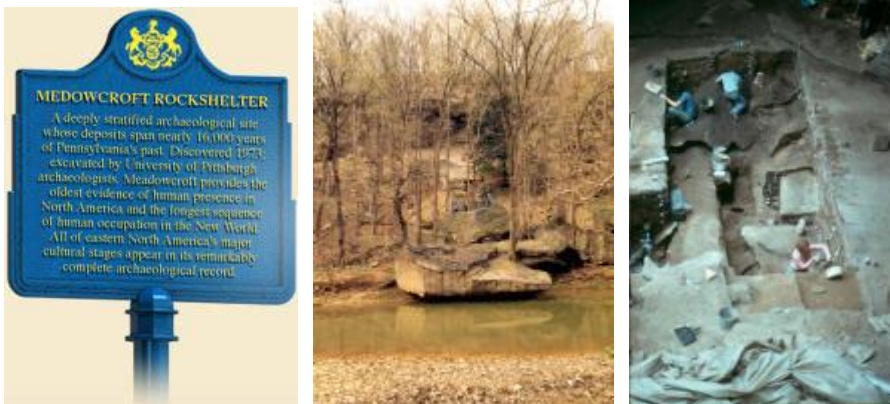
<http://people.delphiforums.com/MCCONAUGHY/meadowcroft/meadow.htm>

County Location: Washington

Introduction

Meadowcroft Rockshelter is an archaeological site located near [Avella](#) in [Washington County](#), in southwestern Pennsylvania, United States. The site, a [rock shelter](#) in a bluff overlooking Cross Creek (a tributary of the Ohio River), is located about 36 miles west-southwest of Pittsburgh. The site, including a museum and 18th-century village, is operated by the Heinz History Center. The artifacts from the site show the area has been continually inhabited for 16,000 years. It is designated as a historic public landmark by the [Washington County History & Landmarks Foundation](#).

State Marker



A deeply stratified archaeological site whose deposits span nearly 16,000 years of Pennsylvania's past. Discovered 1973; excavated by University of Pittsburgh archaeologists. Meadowcroft provides the oldest evidence of human presence in North America and the longest sequence of human occupation in the New

World. All of eastern North America's major cultural stages appear in its remarkably complete archaeological record.

Behind the Marker

Like some private detectives, archaeologists spend much of their time sifting through other people's garbage.

Sometimes, however, the other people have been dead thousands of years. When a group of archaeologists first showed up at the Meadowcroft Rockshelter site in 1973, they found beer cans and the remains of camp fires scattered around the site. A little bit of digging revealed more fire pits and older steel beer cans, then colonial era glass bottles. Apparently, human beings had been gathering at this site for quite some time to warm and refresh themselves around makeshift hearths.

More digging brought the archaeologists into the era before European contact, and the nature of the artifacts they uncovered changed accordingly. They still found fire pits, but now the stuff left behind included bits of animal bone and basketry, as well as fragments and flakes from the making of stone knives, arrowheads, and spear points. The materials found included flint from Ohio, jasper from eastern Pennsylvania, and marine shells from the Atlantic coast, suggesting that the people who left these items behind were highly mobile and probably involved in long-distance exchange with other populations. Like the more recent occupants of the Meadowcroft Rockshelter, these ancient peoples liked to gather around campfires, but instead of drinking beer, they spent their time manufacturing tools from stone, bone, and wood.

The Miller lanceolate speartip, named in honor of Albert Miller, who discovered...

Credit: Dr. J. M. Adovasio, Mercyhurst Archaeological Institute.

Judging from the archaeological record, the first humans appeared at Meadowcroft anywhere from 16,000 to 12,000 years ago. They lived by their wits in an often hostile environment, traveling in small bands, dressing themselves in the skins of the animals they hunted. In the cold and often harsh climate of a dying Ice Age, they took shelter where they could find it, and few places were more enticing than a natural rock formation that provided protection from animal predators, human enemies, and the elements.

The rockshelter at Meadowcroft is a natural formation carved out of brown sandstone by the elements over millions of years. It is located in the southwestern corner of Pennsylvania, not far from the Ohio River, which was a major route of travel for the peoples of ancient America. While not quite a "cave" in the way that popular culture imagines the homes of our earliest ancestors, the rockshelter's walls and overhang provided plenty of protection from the elements for the humans who encamped here. Carbon-14 dating on charcoal and bone fragments recovered from its ancient fire pits suggests that humans may have occupied this site as early as 16,000 years ago. If that is the case, then it is the oldest site of human occupation thus far documented in the Western Hemisphere, pushing back considerably the 11,500-year-old date associated with the Clovis site in New Mexico. Some archaeologists question the age of the Meadowcroft artifacts because carbon-14 dating can vary considerably and in the case of Meadowcroft, may be affected by carbon from local coal deposits.

Thus, scholars still dispute whether the Meadowcroft Rockshelter is a genuine "pre-Clovis" site. Nevertheless, excavations at the rockshelter have yielded a wealth of artifacts that shed light on the first Pennsylvanians. Like other Paleo-Indians (12,000-8,000 B.C.), the earliest humans to take shelter at Meadowcroft were nomadic hunter-gatherers who traveled in small bands of about 20-30 people. The workmanship evident in the tools and tool fragments they left behind indicates that they were skilled craftsmen as well as hunters. They fashioned stone projectile points for spears and relied on cooperative techniques to harvest what they needed from the land and rivers. During the Archaic Period (c. 8,000-1,000 B.C.), Indian hunter-gatherers continued to seek shelter at

Meadowcroft, but their technology diversified and improved as they made greater use of the natural resources available to them.

For thousands of years, the Meadowcroft Rockshelter offered many advantages to the nomadic peoples of northeastern America. It was large enough to shelter small groups of people against the elements and their enemies. It did not require the time-consuming construction of man-made shelter, and its permanence meant that it could be used year after year, over millennia. Today it is a part of the Meadowcroft Museum of Rural Life in Washington County, which also uses historic structures to recreate a nineteenth-century western Pennsylvania farm village. The Meadowcroft Rockshelter, an internationally famous archaeological site, opens a window for modern Pennsylvanians into their most ancient forbearers.

Beyond the Marker

Bruce G. Trigger ed., Wilcomb E. Washburn ed., *Cambridge History of the Native Peoples of the Americas*, volume 1: North America, Part I (Cambridge, England: Cambridge University Press, 1, 1996); J. M Adovasio and Jake Page, *The First Americans: In Pursuit of Archaeology's Greatest Mystery* (New York: Random House, 2002); Kurt Carr and James Adovasio, *Ice Age Peoples in Pennsylvania* (Harrisburg: Penn. Hist and Museum Comm, 2002); "Meadowcroft," Heinz History Center , <http://www.heinzhistorycenter.org/meadowcroft.aspx> .

B. An Eastern Woodland Indian Village/First Nation's Technology



Name: Eastern Woodland Indian Village

County Location: Washington

Adapted from:

<http://www.nativetech.org/scenes/>

<http://www.oneidanation.org/culture/page.aspx?id=1308>

www.elko.k12.nv.us/ecsdctc/.../Woodland%20Indians%20Tribes.ppt

<http://www.coe.iup.edu/teachingpahistory/Resources/references.pdf>

<http://www.heinzhistorycenter.org/meadowcroft.aspx>

Introduction:



The Lenni Lenape (literally meaning "original people"), or Delaware, told a creation story in which the first man and woman grew from a tree on the back of a turtle in a vast ocean. The Iroquois told a similar story claiming they were descendants of a woman who had fallen from the sky and landed safely on the back of a turtle.

Like Indian peoples living elsewhere in what would eventually become known as Pennsylvania, the Delaware and Iroquois did not keep written records of their history before contact with Europeans, but they claimed for themselves a status as "first people" that conveyed a sense of their attachment to and long history with the land they inhabited.

Travel 400 years into the past to explore Meadowcroft's recreated Eastern Woodland Indian Village. Visitors to the walled village can explore the interior of a wigwam, see carefully recreated prehistoric artifacts, and try their hand at using the atlatl, a type of prehistoric spear thrower. Immediately outside the village is a traditional Three Sisters garden as well as a hunting camp filled with furs, hunting tools, and fishing equipment. Hands-on opportunities abound for children and adults alike. Pound corn into corn meal using a mortar, cracks nuts with a nutting stone, or learn to make holes using a pump drill. The village is based on archaeological evidence from the region.

The Eastern Woodland Indians were not nomadic people and built their own home for shelter from the elements. The type of dwellings that they built were known as longhouses. These were long, rectangular dwellings with frames made from the wood from young trees or saplings and covered with bark that was often sewn together. The Northeastern Woodland Indians used animal skins, wood, and hay to construct their homes. Longhouses varied in size and in the number of people that they could accommodate. While some could provide shelter for as many as twenty families, some tribes, like the Powhatan whose homes are shown here, were constructed to house a single family.

One of the more widely shelter designs used by the Woodland Indians, beside the longhouse, was the bark-covered wigwam. Wigwams were often shaped like a cone or, in some cases, a domed structure. The framing for these houses were usually made from small flexible trees or saplings that were firmly embedded in the ground in a circle. They were then bent overhead into an arch where they were tied together with bark fibers, or rawhide.

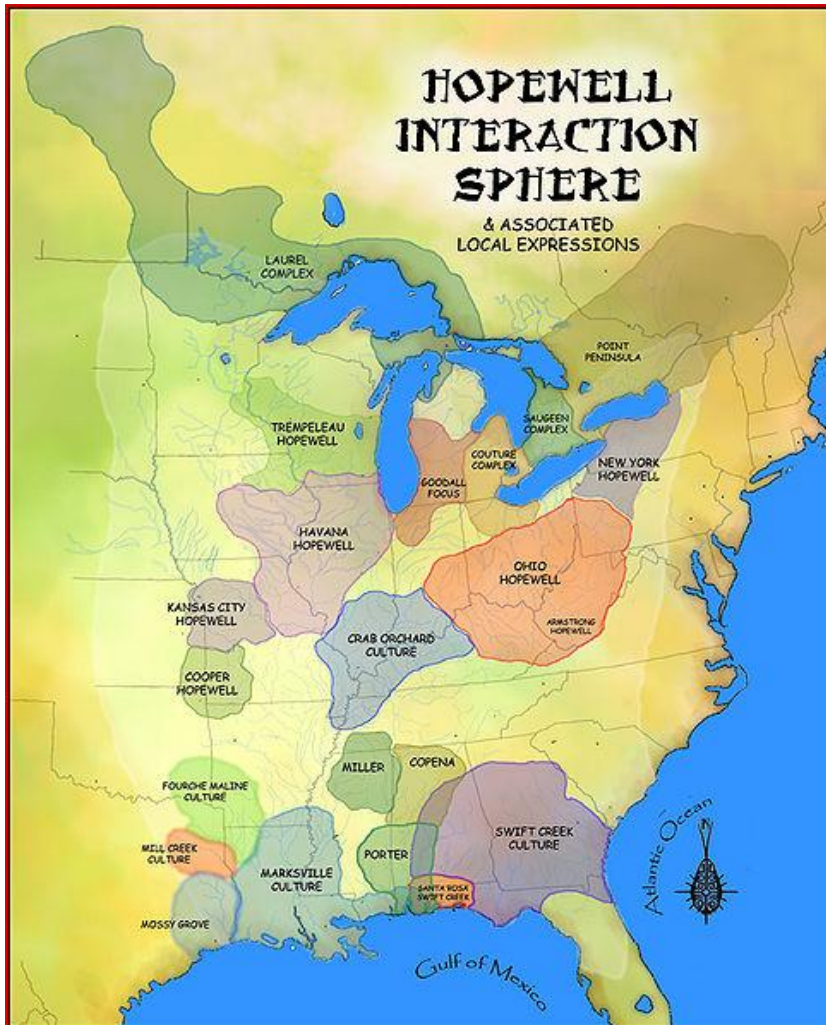
NativeTech offers a Virtual Tour of Native American Technology and Art via Scenes from the Eastern Woodlands circa 1500 at <http://www.nativetech.org/scenes/>

Contents:

- [At our homestead](#)
- [Building our wigwam](#)
- [Tending to our garden](#)
- [Making our stone tools](#)
- [Grinding our corn and nuts](#)
- [Catching fish in a net from our canoe](#)
- [Cooking our food we gather](#)
- [Working inside our wigwam](#)
- [Making our pots](#)
- [Playing our hoop and dart game](#)
- [Picking cherries for our bread](#)

- [Learning to shoot our arrows](#)

C. The Neolithic Revolution/Rise of Urban Civilizations



WORLD HISTORY THEME

The **Neolithic Revolution** is the first [agricultural](#) revolution—the transition from [hunting and gathering](#) to [agriculture](#) and settlement. Archaeological data indicate that various forms of [domestication](#) of plants and animals arose independently in six separate locales worldwide ca. 10,000–7000 years [BP](#) (8,000–5000 [BC](#)), with the earliest known evidence found throughout the tropical and subtropical areas of southwestern and southern Asia, northern and central Africa and Central America. However, the Neolithic Revolution involved far more than the adoption of a limited set of food-producing techniques. During the next millennia it would transform the small and mobile groups of hunter-gatherers that had hitherto dominated human history, into sedentary [societies](#) based in built-up [villages](#) and [towns](#), which radically modified their [natural environment](#) by means of [specialized food-crop cultivation](#) (e.g., [irrigation](#) and food storage [technologies](#)) that allowed extensive surplus food production. These developments provided the basis for concentrated high [population densities](#) settlements, specialized and complex [labor diversification](#), [trading economies](#), the development of non-portable [art](#), [architecture](#), and [culture](#), centralized administrations and political structures, hierarchical [ideologies](#) and depersonalized systems of knowledge (e.g., [property regimes](#) and [writing](#)). The first full-blown

manifestation of the entire [Neolithic](#) complex is seen in the Middle Eastern [Sumerian](#) cities (ca. [3,500 BC](#)), whose emergence also inaugurates the end of the prehistoric Neolithic period. The relationship of the above-mentioned Neolithic characteristics to the onset of agriculture, their sequence of emergence and empirical relation to each other at various Neolithic sites remains the subject of academic debate, and seems to vary from place to place, rather than being the outcome of universal laws of [social evolution](#). -- http://en.wikipedia.org/wiki/Neolithic_Revolution

Introduction

The Adena culture refers to the prehistoric American Indian peoples that lived in southern Ohio and neighboring regions. They were the first people in this region to settle down in small villages, cultivate crops, use pottery vessels, acquire exotic raw materials, such as copper and marine shell, to make ornaments and jewelry, and bury their honored dead in conical burial mounds.

This transition from a purely hunting and gathering way of life to a more settled farming way of life sometimes is referred to as the "Neolithic Revolution," but in Ohio, the process was more evolutionary than revolutionary. The Late Archaic ancestors of the Adena already had begun to gather intensively many of the plants that would become the staple crops in the Early Woodland Period and they occasionally made pottery and used copper and shell to make ornaments.

The Adena grew a variety of plants in their gardens, including squash, sunflower, sumpweed, goosefoot, knotweed, and maygrass. This set of native plants often is referred to as the Eastern Agricultural Complex. The Ohio and Mississippi valleys were one of only seven regions in the world where people turned local plants into the basis for a food-producing economy. The consequences of this change in how people made a living would be far-reaching. The Adena lived in small villages near their gardens, but they likely moved frequently as they continued to follow a hunting and gathering way of life, which they supplemented with the harvest from their gardens. Adena pottery consisted of large, thick-walled vessels that likely were used to cook the ground-up seeds of the Eastern Agricultural Complex into a gruel something like oatmeal.

The Adena cemented their ties to particular regions by burying their dead in prominent mounds that may have served as territorial markers. Sometimes the mounds would be accompanied by small, circular earthen enclosures that surrounded ritual spaces. The Miamisburg Mound, in Montgomery County, is the largest example of an Adena burial mound in Ohio.

By 100 B.C., some of the Adena groups had begun to build larger earthworks and expand their efforts to acquire exotic raw materials. These groups became the Hopewell culture (see http://en.wikipedia.org/wiki/Hopewell_tradition)

1. McKee's Rocks



Site Name: McKee's Rocks

County Location: Allegheny

Adapted from:

<http://www.mckeesrocks.com/HistoryaBriefHistory.html>

<http://explorepahistory.com/hmarker.php?markerId=735>

<http://explorepahistory.com/story.php?storyId=26&chapter=2> (NB: State History of Indians)

http://en.wikipedia.org/wiki/McKees_Rocks,_Pennsylvania



George Washington and Christopher Gist meet Delaware King Shingiss and Chief Guyasuta at the Indian Mound - 1753

Introduction

McKee's Rocks is one of the oldest places of human habitation in Eastern North America, and might readily have become the site of Pittsburgh, but for the chances of history.

As the last Ice Age ended about 10,000 years ago, glaciers and water receded, and land again began to appear, revealing the hills and valleys we now call home.

The area around the Ohio River Valley teemed with wildlife, and the clean streams contained plentiful supplies of fish and other marine life. Early Native American peoples found this an ideal place to live and engage in some agricultural pursuits, making use of the fruits, berries, and other foods that grew wild in the valley.

Settlement at this historic spot dates backward for some 5,000 years, to a time when Greece and Rome did not exist, and when the early civilizations of Egypt and Babylonia had hardly begun.

Back around 3,000 B.C. this spot was a sizeable town for the day, according to Richard Lang, Carnegie Museum archeologist.

These early peoples grew corn, beans, and perhaps other crops on the rich bottom land by the river, now known as 'the Bottoms'-which stretches to the McKee's Rocks Bridge. They lived by farming, hunting, fishing, digging mussels from the stream, and gathering wild fruits, nut and edible roots. They defended their villages with bows and arrows and broad-based spears, which they threw with great accuracy by means of an ingenious

device called an atlatl.

Since these people are known only by their works, their fate is unknown. They may have been destroyed by disease or famine, have moved on because their land's fertility was used up, or have been slain by some wandering and more warlike people.

The next definite occupants of the town of whom traces can be found were of the Adena, or Mound-Builder culture, and lived here soon after 1,000 B.C., about the time King Solomon was ruling in ancient Israel. They began building the famous mound, of which only a part now remains.

2. McKee's Rocks State Marker Resource



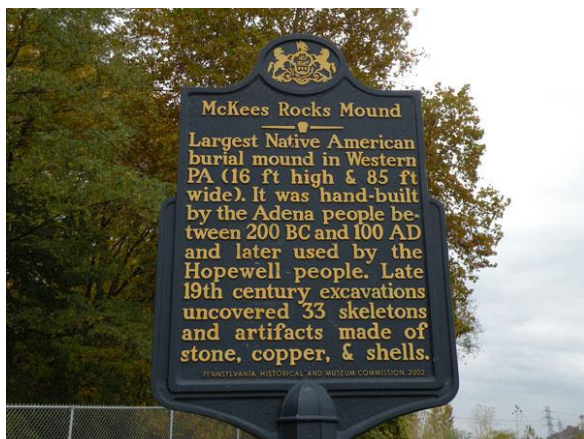
Adapted from:

<http://explorepahistory.com/hmarker.php?markerId=735>

County Location: Allegheny

Geographic locale: Confluence of Chartiers Creek and the Ohio River four miles south of downtown Pittsburgh

Marker Location: Rangers Field, Shingiss and Sproul Streets. The Bottoms, McKee's Rocks



Introduction

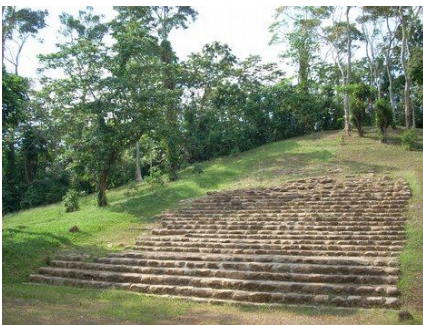
McKee's Rocks is the largest Native American burial mound in Western PA., (16 ft. high and 85 ft wide). It was hand-built by the Adena people between 200BC and 100 AD and later used by the Hopewell and Monongahela people. Late 19th century excavations uncovered thirty-three skeletons and artifacts made of copper and shells. Bordering Pittsburgh to the west, on the southern bank of the Ohio River, the neighborhood of McKees Rocks might surprise you. A cliff near the river's edge gave the town its name; General Alexander McKee was granted these rocks for his service in the French & Indian War back in 1769. But the rocks have an

even more sacred history as a Native American burial ground from at least 5,000 years ago (known as "Indian Mound").



Behind the Marker

Growing up in Charlottesville, Virginia in the mid-1700s, Thomas Jefferson heard an interesting story about an Indian burial mound near his home. Although the local native population had long since been displaced by colonists, one day a party of unknown Indians showed up and, without asking for any assistance, "went through the woods directly" to an ancient burial mound.



McKEES ROCKS, Pa. — THE [PITTSBURGH CHANNEL](#).com There's a battle over the bodies at [an](#) old [Indian](#) burial mound that was discovered in McKees Rocks, within sight of downtown Pittsburgh. Team 4 investigator Paul [Van](#) Osdol reported that one [group](#) wants the bones to be taken out of a box and...
http://article.wn.com/view/2010/06/29/Team_4_Remains_Moved_From_Old_McKees_Rocks_Indian_Mound/
[MSNBC](#) 2010-06-29

From McKee's Rocks Mound, the Historical Society of Western Pennsylvania

After spending some time there making "expressions which were construed to be those of sorrow," the Indians, according to Jefferson, returned to the main road, "from which they had detoured about half a dozen miles to pay this visit, and pursued their journey." Jefferson was fascinated by this story and the clues it offered about the mysterious earthen mounds that dotted the Appalachian frontier. The first reports of their existence came from fur traders traveling through the Pennsylvania and Virginia backcountry. When local Indians were unable to offer any explanation for the mounds' origins, curious European scholars developed elaborate theories to explain their existence. Some of Jefferson's contemporaries believed that the mounds were created by an ancient civilization in the Americas descended from the ancient Egyptians or Hebrews. Others believed that they were somehow linked to the great Indian civilizations of Mesoamerica, such as the Maya and Aztecs. Still others

argued that they were the product of ancient Viking or Welsh migrations to North America. Jefferson suspected that the mounds were the work of the ancestors of contemporary Native Americans, and the story from his childhood of Indians traveling paying their respects at one such mound seemed to confirm his suspicions.



In 1896, Frank M. Gerrodette of the Carnegie Museum conducted the first excavation...

Credit: Courtesy of Carnegie Museum of Natural History, Pittsburgh

The McKee's Rocks Mound, located at the confluence of Chartiers Creek and the Ohio River four miles south of downtown Pittsburgh, is just one of thousands of Indian burial mounds, ranging from a few feet to 100 feet tall, which were still visible in Jefferson's day throughout the Ohio-Mississippi Valley watershed. These mounds took a variety of forms. Most were made out of earth, but some in the south were made out of marine shells. Most were conical in shape, but others had platform, bread loaf, or dome designs. Some were even made in the shape of animals, such as serpents, birds, or deer. The McKee's Rock Mound, a dome-shaped earthwork 85 feet in diameter and 266 feet in circumference, is the most impressive example of this ancient Indian architecture in modern Pennsylvania.

Archaeology conducted at the McKee's Rocks Mound and similar sites has done much to solve the riddle that fascinated Jefferson. Mounding-building developed among Indians in the Ohio Valley during the Adena culture stage (800 B.C.-100 A.D.) and then flourished during the Hopewell (100-500) and Mississippian Eras (700-1300). The evolution of mound building roughly paralleled the development of maize agriculture in the Ohio and Mississippi Valleys. For the hunter-gatherers of the Adena and early Hopewell periods, the mounds were burial sites that they probably returned to on a seasonal basis.



McKee's Rocks Mound, the largest mound built in Pennsylvania by Native Americans...

Credit: Courtesy of Carnegie Museum of Natural History, Pittsburgh.

Judging from the log-lined tombs and bountiful grave goods (stone pipes, pottery, jewelry, beads, and tools) found at these sites, burial there signified an elite or honored status. As the same extended family or lineage returned to the site from one generation to the next, the mound grew larger with the addition of more burials. When the adoption of agriculture made it possible for more settled communities to develop, the mounds became significant as ceremonial and social centers as well as burial sites. This change is evident in the latter Hopewell and Mississippian cultures, when some mounds began to feature ceremonial platforms or adjacent plazas. By

the end of the 1700s, white settlers were moving into the Ohio Valley in large numbers. They destroyed some of the mounds through plowing and road construction; others were lost to amateur archaeologists and treasure-seekers. Some settlers, however, recognized these mounds as ancient and spiritually powerful places and chose to use them as burial sites as well (the excavation of the McKee's Rocks Mound uncovered some modern non-Indian burials). Local communities sometimes featured images of these mounds on nineteenth-century postcards.



During the excavation, archeologists unearthed hundreds of artifacts, including...

Credit: Courtesy of Carnegie Museum of Natural History, Pittsburgh

Popular interest in the mounds peaked during the 1890s, when professional archaeologists excavated many of them. Artifacts recovered from such digs were displayed at the 1893 World Columbian Exposition in Chicago. The following year, a comprehensive study published by the Bureau of American Ethnology gave scientific credence to Jefferson's supposition from a century earlier. The mounds were the work of the ancestors of modern Indians, not an ancient non-Indian civilization. Archaeologists excavating the McKee's Rocks Mound during the 1890s uncovered thirty-three burials, as well as stone and bone tools, marine shell beads, and pottery. The archaeological evidence suggests that this mound was built in three stages by Indians of the late Adena and early Hopewell cultures. Most of the recovered artifacts are associated with the Adena and Hopewell cultures, but archaeologists have also found materials associated with the much later Monongahela culture, which occupied the region during the late Woodland Period (1000-1500 A.D.). Today, archaeologists do not excavate Indian burials unless such sites are disturbed by some other event, such as a construction project, that will result in their destruction. That professional commitment, along with the protection of many surviving mounds in local, state, and national parks, is helping to preserve this important element of the American past for future generations.

Beyond the Marker

Books:

Anthony F. C. Wallace, *Jefferson and the Indians: The Tragic Fate of the First Americans* (Cambridge, Massachusetts: Belknap Press of Harvard University Press, 1999).

Edward V. McMichael, "An Analysis of McKee's Rocks Mound, Allegheny County, Pennsylvania" *Pennsylvania Archaeologist* (26, 1956): 129-51.

George R. Milner, *The Moundbuilders: Ancient Peoples of North America* (London: Thames and Hudson, 2004).

Educator's Guide:

[A Brief Guide to The History and Geography of McKees Rocks](#)

<http://srsd.schoolfusion.us/modules/groups/homepagefiles/cms/498472/File/PDF%20Docs/History%20Guide.pdf?sessionid=cf82e38765758a027934af8e16766e87>

Controversy:

<http://www.post-gazette.com/pg/10219/1078362-57.stm>

<http://www.post-gazette.com/pg/10258/1087667-100.stm>

Comparative Materials:

Adena Culture: <http://www.mnsu.edu/emuseum/prehistory/northamerica/culture/plains/adena2.html>

Hopewell Tradition: http://en.wikipedia.org/wiki/Hopewell_tradition

National Register of Historic Places: <http://www.nps.gov/nr/travel/mounds/builders.htm>

NEH Exhibit: <http://www.neh.gov/news/humanities/2004-09/cahokia.html>

NEH Nativeweb: <http://www.nativeweb.org/>

Wiki Resources for Kids: <http://www.historyforkids.org/learn/northamerica/before1500/history/hopewell.ht>

D. The First Global War: The Seven Years War in Western Pennsylvania/ Allegheny County



WORLD HISTORY THEME

A **world war** is a [war](#) affecting the majority of the world's most powerful and populous nations. World wars span multiple [countries](#) on multiple [continents](#), with battles fought in multiple [theaters](#), and last for multiple years. The term has usually been applied to two conflicts of unprecedented scale that occurred during the 20th century, [World War I](#) (1914–1918) and [World War II](#) (1939–1945), although in retrospect a number of earlier conflicts may be regarded as "world wars".

The **Seven Years' War** is often regarded as the first “global military” conflict between 1756 and 1763, involving most of the [great powers](#) of the time affecting [North](#) and [Central America](#), [Europe](#), the West [African](#) coast, [India](#) and the [Philippines](#). In the historiography of some countries, the war is alternatively named after respective theaters: [French and Indian War](#) ([USA](#) , 1754–1763), [Pomeranian War](#) ([Sweden](#), 1757–1762), [Third Carnatic War](#) ([India](#), 1757–1763) and [Third Silesian War](#) ([Germany](#) and [Austria](#), 1756–1763). The war was driven by the antagonism between the [British Empire](#) (in [personal union](#) with [Hanover](#)) and the [Bourbons](#) (in [France](#) and [Spain](#)), resulting from overlapping interests in their colonial and trade empires, and by

the antagonism between the [Hohenzollerns](#) (in [Prussia](#)) and [Habsburgs](#) ([Holy Roman Emperors](#) and [archdukes](#) in [Austria](#)), resulting from [territorial](#) and hegemonial conflicts in the [Holy Roman Empire](#). The [diplomatic revolution](#) established an [Anglo-Prussian camp](#), allied with some smaller [German states](#) and later [Portugal](#), as well as an [Austro-French camp](#), allied with [Sweden](#), [Saxony](#) and later [Spain](#). The [Russian Empire](#) left its offensive alliance with the Habsburgs on the succession of [Peter III](#), and like Sweden concluded a separate peace with Prussia in 1762. The war ended with the peace treaties [of Paris](#) (Bourbon France and Spain, Great Britain) and [of Hubertusburg](#) (Hohenzollerns, Habsburgs, [Saxon elector](#)) in 1763. The war was characterized by sieges and arson of towns as well as open battles involving extremely heavy losses; overall, some 900,000 to 1,400,000 people died. [Great Britain](#) excelled her Bourbon rivals in the contested overseas territories, gaining the bulk of [New France](#), [Spanish Florida](#), some [Caribbean](#) islands, [Senegal](#) and superiority over the French outposts on the Indian subcontinent. The [native American tribes](#) were excluded from the peace settlement, and were unable to return to their former status after the resulting [Pontiac's rebellion](#). In Europe, [Frederick II of Prussia](#) failed to complete a preemptive strike against Austria, and his numerically superior opponents repulsed and [at Kunersdorf](#) nearly annihilated his forces. Frederick however recovered, regained ground and managed to avoid any concessions in Hubertusburg, where the [status quo ante bellum](#) was restored. [William Pitt's](#) saying that "**America was won in Germany**" referred to the Prussian war effort, which enabled Great Britain to keep her continental commitment limited and focus on her "blue water policy," successfully establishing naval supremacy. While French and allied forces were able to occupy Prussian and Hanoverian territories up to [East Frisia](#), French ambitions to invade Britain and to continue with their [guerre de course](#) were thwarted by a British naval blockade, which also impaired French supply routes to the colonies. The involvement of Portugal, Spain and Sweden did not return them to their former status as great powers. Spain's short intervention resulted in the loss of Florida, though she gained [French Louisiana](#) west of the [Mississippi](#) in exchange and Britain returned [Cuba](#) as well as in [the Philippines](#). --http://en.wikipedia.org/wiki/World_war, http://en.wikipedia.org/wiki/Seven_Years%27_War

The Seven Years War in Western Pennsylvania

Adapted from:

<http://www.dcnr.state.pa.us/stateparks/parks/point.aspx>, http://en.wikipedia.org/wiki/Point_State_Park, http://travel.yahoo.com/p-travelguide-3001573-fort_pitt_museum_pittsburgh-i, and <http://www.heinzhistorycenter.org/secondary.aspx?id=296>,

Note an excellent article, "Forts at the Forks: Frontier History Comes to Life at the Fort Pitt Museum" by Jane Ockershausen, in [Pennsylvania Heritage Magazine](#) Volume XXII, Number 2 - Spring 1996. For text, see

http://www.dgs.state.pa.us/portal/server.pt/gateway/PTARGS_6_2_41141_4287_472417_43/

See also Senator John Heinz project Video Tours of the museum with a "docent" narrator at: <http://www.worldsinmotion.org/>



Introduction

Allegheny County was the first in Pennsylvania to be given a [Native American](#) name, being named after the [Allegheny River](#). The word "Allegheny" is of [Lenape](#) origin, with uncertain meaning. It is usually said to mean "fine river", but sometimes said to refer to an ancient mythical tribe called "Allegeti" who lived along the river long ago before being destroyed by the Lenape. Not a great deal is known about the native inhabitants of the region prior to European contact. During the colonial era various native groups claimed or settled in the area, resulting in a multi-ethnic mix that included [Iroquois](#), [Lenape](#), [Shawnee](#), and Mingo. The first [Europeans](#) to enter the area were the [French](#) in 1749. Captain Pierre Joseph de Celeron, sieur de Blainville claimed the [Ohio Valley](#) and all of Western Pennsylvania for [Louis XV of France](#). The captain traveled along the [Ohio](#) and Allegheny Rivers inserting lead plates in the ground to mark the land for [France](#).

The confluence of the Allegheny and Monongahela rivers, creating the Ohio River, and was once at the center of river travel, trade, and even wars throughout the pioneer history of [Western Pennsylvania](#). During the mid-18th century, the armies of [France](#) and the [Great Britain](#) carved paths through the wilderness to control the point area and trade on the rivers. The French built [Fort Duquesne](#) in 1754 on foundations of [Fort Prince George](#), which had been built by the colonial forces of [Virginia](#). Since most of the towns during that era were developed along [waterways](#), both the French and the British desired control over the local rivers. Therefore, the British sent Major [George Washington](#) to try to compel the French to leave their posts, with no success. Having failed in his mission, he returned and nearly drowned crossing the ice-filled Allegheny River. In 1754, the English tried again to enter the area. This time, they sent 41 Virginians to build [Fort Prince George](#). The French got news of the plan and sent an army to take over the fort, which they then resumed building with increased fortification, renaming it [Fort Duquesne](#).

The loss of the fort cost the English dearly because [Fort Duquesne](#) became one of the focal points of the [French and Indian War](#). The French held Fort Duquesne during that war, and it became one of the focal points for that war because of its strategic riverside location in disputed territory.

The French held the fort successfully early in the war, turning back the [expedition led](#) by General [Edward Braddock](#).

A [smaller attack](#) by [James Grant](#) in September 1758 was repulsed, but with heavy losses. Two months later, on November 25, the [Forbes Expedition](#), under General [John Forbes](#), captured the site after the French destroyed Fort Duquesne the day before. The British subsequently built a new fort on the site, including a moat, and named it [Fort Pitt](#) after William Pitt, the Elder, the Prime Minister of England. The small village of *Pittsburgh* soon grew around Fort Pitt and the name was later officially changed to Pittsburgh.

The Forbes Expedition was successful where the Braddock expedition had failed because of the [Treaty of Easton](#), in which local [American Indians](#) agreed to abandon their alliance with the French. American Indians,

primarily [Delawares](#) and [Shawnee](#), made this agreement with the understanding that the British military would leave the area after the war. The Indians wanted a [trading post](#) on the spot, but they did not want a British army garrison.

As a result, in 1763 local Delawares and Shawnees took part in [Pontiac's Rebellion](#), an effort to drive the British from the region. The Indians' [siege of Fort Pitt](#) began on June 22, 1763, but the fort was too strong to be taken by force. In negotiations during the siege, the commander of Fort Pitt gave two Delaware emissaries blankets that had been exposed to smallpox, in hopes of infecting the surrounding Indians and ending the siege. The attempt was probably unsuccessful, and on August 1, 1763, most of the Indians broke off the siege to intercept an approaching force under Colonel [Henry Bouquet](#), resulting in the [Battle of Bushy Run](#). Bouquet fought off the attack and relieved Fort Pitt on August 20.

After Pontiac's War, Fort Pitt was no longer necessary to the British Crown, and was abandoned to the locals in 1772.

At that time, the Pittsburgh area was claimed by both Virginia and Pennsylvania, and a power struggle for the region commenced. Virginians took control of Fort Pitt, and for a brief while in the 1770s it was called Fort Dunmore, in honour of Virginia's Governor [Lord Dunmore](#). The fort was a staging ground in [Dunmore's War](#) of 1774. During the [American Revolutionary War](#), Fort Pitt was the headquarters for the [western theatre](#) of the war.

A small brick building called the Blockhouse—actually an outbuilding known as a [redoubt](#)—remains in Point State Park, the only intact remnant of Fort Pitt. It was erected in 1764, and is believed to be the oldest building, not only in Pittsburgh, but in Western Pennsylvania. Used for many years as a house, the blockhouse was purchased and has been preserved for many years by the Daughters of the American Revolution, who open it to the public.

The Fort Pitt Museum, located next to the Blockhouse, offers a wide variety of exhibits and dioramas that cover the early French expeditions into the region to the beginning of Pittsburgh's industrial age.

The site is now Pittsburgh [Point State Park](#). For parking consult http://www.hswp.org/uploads/Media/5_FortPittMuseumPre-isitPacket.pdf

1. Fort LeBoeuf: A Shot in the Backwoods of Pennsylvania Sets the World Afire

Marker Details



Name: Fort LeBoeuf

County Location: Erie

Marker Location: US 19 in Waterford

Marker Text

Three forts have stood on this site. French fort, built 1753 to guard road into Ohio Valley, abandoned 1759. British fort built in 1760, burned by Indians in 1763. American fort to protect settlers, built in 1794.



Rebellion

The rebuilt Fort LeBoeuf was burned by Indians during Pontiac's

Behind the Marker

This fort was the second in a series of posts that the French built between spring 1753 and summer 1754 to assert their possession of the Ohio Country. These four posts [Fort Presque Isle](#), Fort LeBoeuf, [Fort Machault](#), and [Fort Duquesne](#) ran from Lake Erie to the Forks of the Ohio; they represented the last links in France's effort to connect its dominions in Canada with those in the Illinois Country and Louisiana.

Fort LeBoeuf (modern Waterford, Pennsylvania) guarded the southern end of the portage road between Lake Erie and French Creek, which ran to the Allegheny River. It served as a French trading post and garrison until 1759, when the fall of Fort Niagara forced the French to abandon the Ohio Country. The British occupied the site until June 1763, when Ohio Indians angered by the British failure to withdraw from their homelands overwhelmed the garrison there during Pontiac's Rebellion.

The most famous encounter at Fort LeBoeuf took place between Virginia militia officer [George Washington](#) and the French commander of the post, Jacques Legardeur de Saint-Pierre, in December 1753. Washington delivered a message from the governor of Virginia, ordering the French to remove themselves from British land, but the French officer politely declined. He sent Washington trudging home through the snow and ice, but not before the young Virginian had taken the opportunity to record a description of the post, [in case the British might need to remove the French by force](#).

The French destroyed this post when they retreated from the Ohio Valley in 1759, but the British rebuilt it a year later. It fell to Indians during Pontiac's Rebellion in June 1763.

Beyond the Marker

Louis M. Waddell and Bruce D. Bomberger, *The French and Indian War in Pennsylvania: Fortification and Struggle During the War for Empire* (Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1996).

W. J. Eccles, *The Canadian Frontier, 1534-1760* (New York: Holt, Rinehart and Winston, 1969).

See and Learn through explorepahistory at <http://explorepahistory.com/viewLesson.php?id=25>

Lesson Plan

Teaching time: 3 class periods

Grade level: high school

What to Know

Students will learn the background of the French and Indian War in Western Pennsylvania. Through the examination of the travels of George Washington to the Western Pennsylvania area in the years 1753-1754, students will uncover the events that led up to the outbreak of war in North America. Furthermore, students will use primary documents to comprehend actions that Washington undertook in critical situations (Jumonville Affair), and to understand how different viewpoints on an event can have an impact far beyond the immediate occurrence of the act. Students will be able to discuss and understand the events surrounding Washington's trip to Ft. LeBoeuf and the conflicting claims of ownership between France and England to the Ohio Country, as well as the Jumonville Affair.

Objectives

1. Be able to discuss the reasons for Washington's mission to Ft. LeBoeuf.
2. Understand and discuss the economic and political importance of the Ohio Valley to the French and English.
3. Discuss and explain the conflicting claims to ownership of the Ohio Valley by the contesting parties.
4. Connect cause and effect relationships and how they impact history.
5. Compare and contrast how important historical events can be interpreted differently.

Standards Alignment

History

- 8.1.12. A. Evaluate chronological thinking.
- 8.1.12. B. Synthesize and evaluate historical sources.
- 8.1.12. C. Evaluate historical interpretation of events.
- 8.1.12. D. Synthesize historical research.
- 8.2.12. A. Evaluate the political and cultural contributions of individuals and groups to Pennsylvania history from 1890 to Present.

2. Fort Pitt



Adapted from:

<http://www.dcnr.state.pa.us/stateparks/parks/point.aspx>

http://en.wikipedia.org/wiki/Point_State_Park

County Location: Allegheny

Marker Location: Point State Park, Pittsburgh

Built by the English, 1759-61, to replace Mercer's Fort of 1758-59. Named for Prime Minister William Pitt of Great Britain. British stronghold in Ohio Valley and center for settlement.

Behind the Marker

Named for British Prime Minister William Pitt, Fort Pitt marked the end of the [Forbes Road](#). It was built between 1759 and 1761 and was the largest and most formidable of the British forts in Pennsylvania. From the beginning, it was a point of contention between the British and their Indian neighbors. The Ohio Indians were no happier with the British fortifying the Forks of the Ohio than they had been with the French. This region was still their homeland, and they believed the British had promised to regard it as such at the 1758 Easton Treaty. [Original Document] In 1759, British intentions became clearer as soldiers, laborers, and settlers congregated around the construction site of Fort Pitt. The Fort was an important depot for the fur trade, but when the British commander-in-chief Sir Jeffrey Amherst decided to stop granting diplomatic presents to the Indians, he permanently alienated those groups--Delawares, Shawnee, and Senecas--who had come to rely on the storehouses at Fort Pitt for their material well-being.



An artist's rendition of Fort Pitt as it appeared around 1776.

Credit: Courtesy the Pennsylvania State Archives

Amherst's policy sparked a large-scale Indian uprising against the British along the Great Lakes-Ohio frontier in summer 1763. Named after the Ottawa chief who led the siege of Detroit, Pontiac's Rebellion is a bit of a

misnomer when applied to the Ohio Country. The Delawares, Shawnee, and Senecas in the Upper Ohio Valley were not under Pontiac's command, but they did share many of his grievances about the British failure to evacuate the old French forts and their refusal to engage in diplomatic gift-giving.

Forts LeBoeuf, [Presque Isle](#), and [Venango](#) fell to assaults by Ohio Indians in June, who then laid siege to Fort Pitt, where hundreds of civilians had taken refuge. For more than a month, Fort Pitt remained cut off from the outside world, desperately awaiting aid that its inhabitants were not even sure was coming.

Marching west from Carlisle on the Forbes Road, Colonel Henry Bouquet engaged the Indians at [Bushy Run](#) on August 6 and lifted the siege of Fort Pitt. The British abandoned the post nine years later, but during the Revolutionary Era, it was reoccupied by militias and civilians embroiled in hostilities with the British and Indians.

Beyond the Marker

Charles M. Stotz, *Outposts of the War for Empire: The French and English in Western Pennsylvania: Their Armies, Their Forts, Their People, 1749-1764* (Pittsburgh, PA: University of Pittsburgh Press, 1985); Louis M. Waddell and Bruce D. Bomberger, *The French and Indian War in Pennsylvania: Fortification and Struggle During the War for Empire* (Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1996).

3. Fort Venango



Adapted from:

<http://explorepahistory.com/hmarker.php?markerId=153>

<http://explorepahistory.com/hmarker.php?markerId=153>

http://en.wikipedia.org/wiki/Venango_Path

<http://explorepahistory.com/hmarker.php?markerId=163>

<http://oldstonehousepa.files.wordpress.com/2010/02/old-stone-house-lesson-plan-french-and-indian-war4.pdf>

<http://oldstonehousepa.org/>



Marker Details

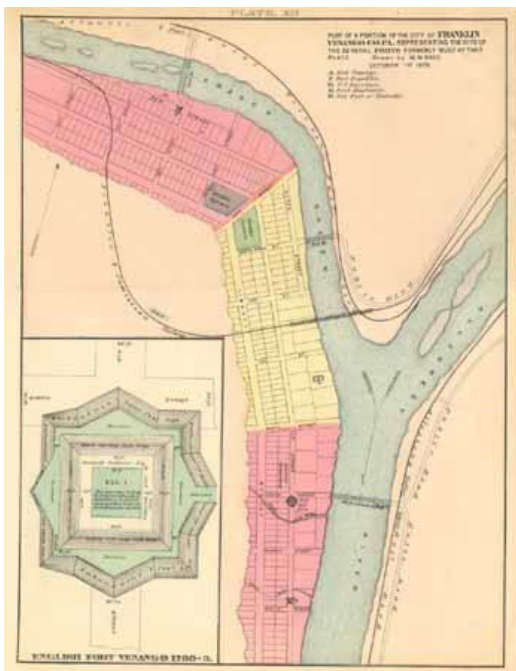
Name: Fort Venango

County Location: Venango

Marker Location: 8th and Elk Streets (on US 322), Franklin

Behind the Marker

The 1878 map which follows shows the positions of Fort Venango, Fort Machault and Fort Franklin...



Credit: From A History of Venango County, 1879 Courtesy the Pennsylvania Historical and Museum Commission

The purpose of Fort Venango was to protect the passage from French Creek to the Allegheny River. The British intended for it to replace Fort Machault, which the French had destroyed when they retreated from the Ohio Valley in 1759. Fort Venango was essentially a large blockhouse with earthwork defenses. It was much smaller than Fort Pitt, the primary British post in the Ohio Country. Seneca Indians attacked it during Pontiac's Rebellion in June 1763 and burned it to the ground, killing its small garrison. They forced the post's commander, Lieutenant Francis Gordon, to write down their grievances concerning the British occupation of the Ohio Country before torturing him to death. When General Amherst learned of Gordon's fate, he wrote to Colonel Henry Bouquet, "no Punishment We can Inflict is Adequate to the Crimes of those Inhumane Villains." This remark, indicative of Amherst's hatred for Indians, reflects the tone of his exchange with Bouquet about using smallpox as a weapon against them.

References:

Charles M. Stotz, *Outposts of the War for Empire: The French and English in Western Pennsylvania: Their Armies, Their Forts, Their People, 1749-1764* (Pittsburgh, PA: University of Pittsburgh Press, 1985) and Howard H. Peckham, *Pontiac and the Indian Uprising* (Detroit, MI: Wayne State University Press, 1999).

4. Venango Path



George Washington drew this map of his route upon his return from a trip to Fort LeBoeuf. He followed the Venango Path from the forks of the Ohio River, east to the village of Venango, then north to the forts of Leboeuf and Machault, depicted at the northern terminus of his route.

Credit: Library of Congress Geography and Map Division

Adapted from:

http://en.wikipedia.org/wiki/Venango_Path
<http://explorepahistory.com/hmarker.php?markerId=163>

Introduction:

Venango Path was a [Native American trail](#) that ran from the Forks of the Ohio (present day [Pittsburgh](#)) to [Presque Isle](#), [Pennsylvania](#), [United States of America](#). The trail was named after the Native American village of Venango where [French Creek](#) empties into the [Allegheny River](#). The village is now the site of the small [city](#) of [Franklin](#), Pennsylvania.

Washington's mission to Fort Le Boeuf

[George Washington](#) and [Christopher Gist](#) travelled along the trail in December of 1753 to deliver a message to the French near Venango village. Due to inclement weather, Washington and Gist left the trail at the Forks of the Ohio, and found shelter in the Indian village of [Logstown](#) (near present day [Ambridge](#), Pennsylvania).^[2] Washington and his men left the village a few days later and proceeded northeast through what is now [Cranberry](#) to [Murdering Town](#) along the [Connoquenessing Creek](#).

On their return from [Fort Le Boeuf](#), Washington and Gist left the Venango Path at Murdering Town which was located at or near present day [Evans City](#), and [Harmony](#), Pennsylvania on what Gist called the "southeast fork of [Beaver creek](#)"^[4] (present-day [Connoquenessing Creek](#)). A Native at the village agreed to guide them down a different trail to the Forks. After marching several miles to the northeast of the original path, the Native turned on Washington and Gist, and fired a shot from his gun.¹ The men escaped harm, but Gist wanted the captured Native executed. However, Washington ordered his attempted assassin released. After the attempted [assassination](#), the two men traveled "across country" through the forest with the use of a [compass](#) to "the head of [Piney creek](#)." From there, they travelled down-stream to the Allegheny River. After spending the night on a small island, they moved a short distance down the river, just above the Native village of [Shannopin's Town](#). From there, they continued their trek back to [Williamsburg, Virginia](#) which they arrived at on January 16th, 1754.

French and Indian War

During the early French and Indian War years, when the French occupied Western Pennsylvania, the trail became a military road connecting together a string of French Forts from Lake Erie to Pittsburgh. These forts included [Fort Presque Isle](#) located on [Lake Erie](#), [Fort Le Boeuf](#) (present day [Waterford](#)), [Fort Machault](#) at Venango (present day [Franklin](#)) and [Fort Duquesne](#) at present day [Pittsburgh](#).

When the British drove the French from Western Pennsylvania (1758) the French burned and abandoned all four forts. The British promptly rebuilt all four again in 1759, changing the name Fort Machault to [Fort Venango](#), and Fort Duquesne to [Fort Pitt](#). Thus the British continued to use the Venango Path as a military road.

During [Chief Pontiac's Rebellion](#) four years later (1763) hostile Natives burned Forts Presque Isle, Le Boeuf and Venango. Following the [Battle of Bushy Run](#), where a British army defeated several hostile tribes, the Natives moved into [Ohio](#) and westward. The Venango Path was no longer used as a Native American trail. After hostilities ceased in Western Pennsylvania, there was no further major military uses of the trail.



Venango Path Marker

County Location: Butler

Marker Location: Franklin Road at Rt. 228, Cranberry Twp., West of Mars

A major Indian path between the Forks of the Ohio (now Pittsburgh) and the Seneca town of Venango (now Franklin) passed through here. On Dec. 27, 1753, George Washington came this way with frontier scout Christopher Gist as they returned from Fort LeBoeuf on a mission for Virginia's Gov. Robert Dinwiddie. The Franklin Road, the first wagon road northward from Pittsburgh, was opened over this route in 1796.

Behind the Marker

The Venango Path traversed the country between the Forks of the Ohio and the Delaware Indian village of Venango (modern Franklin, Pennsylvania), where the French Creek meets the Allegheny River. From there, it headed north to Lake Erie. Blazed by western Delawares and Senecas and then followed by French forces during the Seven Years' War, it was the vital artery in the passage between the Great Lakes and the Ohio River, especially at those times of the year when low water or inclement weather rendered French Creek and the Allegheny not navigable. The French built a string of four posts in 1753-1756 to assert their dominion over the route: marker Fort Presque Isle, marker Fort LeBoeuf, marker Fort Machault, and marker Fort Duquesne.

George Washington traveled parts of the Venango Path in late 1753, to deliver Virginia governor Robert Dinwiddie's warning that the French were trespassing on British land. marker [Original Document] Washington and his guide- marker Christopher Gist almost perished several times along the way.

Early snows made the land route treacherous, and Washington at one point almost drowned in an ice-choked river. One of their Indian guides even proved to be a French agent and fired upon them in the woods.

After taking Fort Duquesne in 1758, the British planned to use the Venango Path as a route of invasion into Canada, but this part of the 1759 campaign never materialized. Regardless, the Venango Path remained an important route of European-Indian trade and warfare until the 1790s.

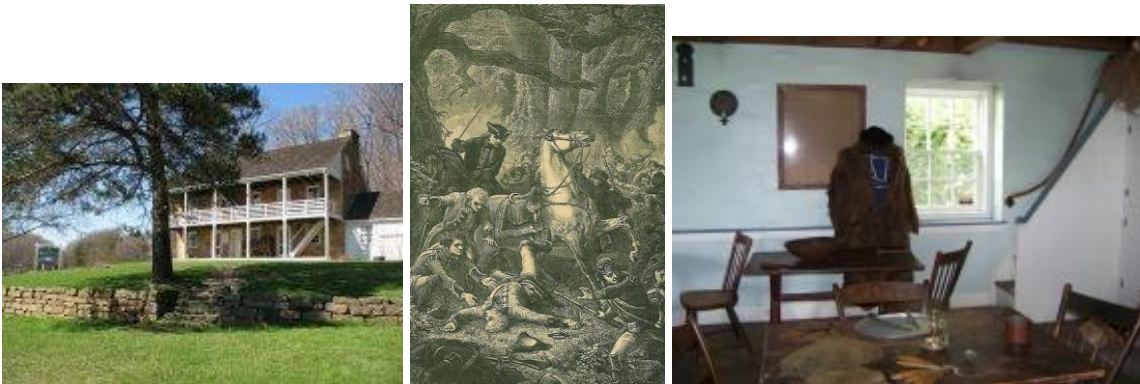
The following marker has a similar story line and therefore has the same behind and beyond the marker text: Venango Path (Fort Franklin) Marker at the intersection of SR 3013 (Old PA 8) and SR 3003 just North of Wesley in Venango County.

Beyond the Marker

Indian Paths of Pennsylvania (Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1971).

Louis M. Waddell and Bruce D. Bomberger, *The French and Indian War in Pennsylvania: Fortification and Struggle During the War for Empire* (Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1996).

5. *Old Stone House*



Location: Butler County

Website: <http://oldstonehousepa.org/for-educators/>

“Looking for a field trip for your history classroom? Consider a visit to the Old Stone House!

As a landmark of our region’s history, the Old Stone House is a great resource for local educators. Tours of the historic Stone House allow students and teachers the opportunity to experience daily life in early America through interactive exhibits and hands-on learning.

All tours can be enhanced with our week-long lesson plans tailored specifically to meet Pennsylvania and National Council for Social Studies (NCSS) Standards. The Stone House offers educators two distinct lesson plans to supplement students’ visit to the site. While these plans are developed for middle and early high school students, they could be adapted for younger students.

For more information please contact the Old Stone House at (724) 738-4964 or [email the curator](#). And if you use our lesson plans in your classroom, please drop us a line and let us know – suggestions and comments are always welcome!”

Click below for free copies of The Old Stone House Lesson Plans! (Lesson plans are in PDF format)

[Old Stone House Lesson Plan-French and Indian War](#)-Twenty years before American colonists declared their independence from Great Britain, another great conflict was fought between 1754 and 1763 for control of North America. Popularly known as the French & Indian War, the struggle began as a contest for the Ohio River

Valley and quickly developed into a multinational struggle pitting Britain and her American colonists against the French. Native peoples supported both sides, but early in the war France had the upper hand in recruiting Indian warriors. The Venango Trail, a major Indian trading route and key transportation route for military forces, passed near the current site of the Stone House. With this fun and challenging lesson plan, students will be fully prepared for a visit to the Old Stone House, where they can see exhibits about the conflict, as well as authentic reproductions of colonial and native artifacts.

[Old Stone House Lesson Plan-Stagecoach Travel](#) Stagecoach travel is a symbol of our nation's heritage: nearly every old western movie features these once-common vehicles prominently. Stagecoaches, however, were not just used in the west but were also an integral part of life in Pennsylvania and the eastern United States before railroads. The Stone House served as a resting place for weary travelers on what was known as the Pittsburgh-Erie Pike. By using this lesson plan and visiting the Old Stone House, students will learn about the importance of transportation development to national history, and the etiquette, customs, and hardships of travel during the period before the Industrial Revolution.

Past Due, but may come again:

November 9, 2010

[Take a Hike with Washington on Nov 27](#)

Posted by oldstonehouse

How about a walk in the woods with the father of our country? You can do just that on Saturday morning, Nov 27 — enjoy fresh air and great scenery while commemorating George Washington's travels through Butler County in 1753.



The hike, sponsored by the Old Stone House, Historic Harmony's Harmony Museum, and Washington's Trail 1753, starts and ends at the Old Stone House.

Back in November 1753, Washington was a 21-year-old volunteer newly commissioned a major by Virginia Lt. Gov. Robert Dinwiddie. He traveled through Pennsylvania Indian country carrying Dinwiddie's ultimatum demanding withdrawal of the French then building forts on land claimed by England and the Virginia Colony. The French response: the British should stay out of from New France.

That ultimatum delivered by Washington, and the military intelligence he obtained during his mission, were instrumental in starting the French and Indian War in southwest Pennsylvania the following spring and summer of 1754.

Along with the 45 minute hike, this year's commemoration includes refreshments, touring the Old Stone House, and a chance to discuss the mission with the young Washington and his frontiersman guide Christopher Gist — re-enactors Brian Cuning of Washington, Pa. and Rich Baker of Claysville, Pa.

The Old Stone House opens at 9:30 a.m., with guided hikes planned for 10 a.m., 11 a.m. and noon. Leading each hike will be a Slippery Rock University history student who will read from the journals of Washington and Gist and explain the significance of Washington's sometimes hazardous journey.

To reserve a hiking slot, call Jennifer Melnick at the Old Stone House, 724-738-4964. Admission is \$5 per person, \$12 per family.

Each hiking group will be limited in size, so event organizers recommend strongly that participants reserve their start times. The hike will cover about a mile of rocky terrain that is close by the original Venango Path followed in part by Washington. Hikers are advised to wear appropriate footwear as well as clothing suitable for the day's weather conditions.

6. *Bushy Run*



Adapted From:

<http://www.bushyrunbattlefield.com/>

http://en.wikipedia.org/wiki/Bushy_Run

<http://explorepahistory.com/viewLesson.php?id=24>

http://www.olivetreegenealogy.com/mil/frind/batt_bushy.shtml

www.youtube.com/watch?v=iQzpcH-Q7Wg

Location: near present-day [Harrison City](#), [Westmoreland County](#), [Pennsylvania](#)

The opening of western Pennsylvania to settlement was the result of a decisive victory over the Native Americans at the Battle of Bushy Run, August 5th and 6th, 1763. Highlights of the site include the interpretive exhibit, "The March to Bushy Run" at the site's visitor center, as well as guided and self-guided tours, special events and educational programs. For video of reenactment, see:

<http://www.youtube.com/watch?v=iQzpcH-Q7Wg>. The **Battle of Bushy Run** was fought on August 5-6, 1763, in western Pennsylvania, between a British column under the command of Colonel [Henry Bouquet](#) and a combined force of [Delaware](#), [Shawnee](#), [Mingo](#), and [Huron](#) warriors. This action occurred during [Pontiac's Rebellion](#). Though the British suffered serious losses, they routed the tribesmen and successfully relieved the garrison of [Fort Pitt](#). In July 1763, a British relief column of 500 British soldiers, including the [42nd Highlanders](#), [60th Royal Americans](#), and [77th Highlanders](#), left [Carlisle, Pennsylvania](#), to relieve Fort Pitt, then under siege. Indian scouts observed Bouquet's army marching west along Forbes Road and reported this to the Indians surrounding Fort Pitt. On August 5, at about 1PM, a group of the force investing Fort Pitt ambushed the British column one mile east of Bushy Run Station, at Edge Hill. The British managed to hold their ground until

after sunset, when the natives withdrew. Bouquet ordered a redoubt constructed on Edge Hill, and the British placed their wounded and livestock in the center of the perimeter. According to one account, the allied tribes attacked in the morning, but were themselves ambushed by the sentries relieved from their evening duty. With the surprise attack of the sentries, from a flank, and a frontal assault by the main British column, the outnumbered Indians fled in a disorganized retreat. A second account holds that the warriors attacked in the morning and "redoubled their efforts to break the British line." As the tribesmen became bolder, Bouquet realized the combat was nearing a crisis. Determined to lure his attackers close enough to maim them, the British leader deliberately weakened one section of his line. Spotting the gap in the enemy defenses, the native warriors rushed forward. Instead, the British soldiers fired a volley in their faces and "made terrible havoc" with the bayonet. The surviving warriors fled and were unable to rally. Having dispersed its attackers, Bouquet's column headed to [Bushy Run](#), a mile along the Forbes road, where there was badly needed water. The battle has since been attributed to the Bushy Run location, despite the main fighting taking place in Edge Hill. Bouquet then marched to the relief of Fort Pitt.

7. Explore Pennsylvania History Lesson Plan: Bushy Run: A Decisive battle of Pontiac's Rebellion: <http://explorepahistory.com/viewLesson.php?id=24>

[Lesson Description](#), [Background](#), [Teacher Resources](#), [Procedure](#), [Assessment](#), [After the Lesson](#), [Student References](#)

[For Further Study](#)

Teaching Time
Six 40-minute periods
Grade Level
Middle School

Disciplines * History * Geography, * Reading, Writing, Speaking and Listening
Historical Period
* New Nation - 1761-1800

Colonel Bouquet led 460 men out of Carlisle to raise the siege of Fort Pitt. Students trace his route from Carlisle to Fort Pitt and will re-live what happened near Bushy Run on August 4th and 5th that changed the course of Pontiac's Rebellion. They will analyze Thomas Hutchins' 1765 map of the Bushy Run battle scene and letters from Bouquet to Amherst, and a modern topographic map.

Objectives

- #1 Simulate the events that led up to Pontiac's Rebellion.
- #2 Observe and analyze a design map of Fort Pitt.
- #3 Follow Bouquet's route from Carlisle to Fort Pitt recording experiences in a journal.
- #4 Analyze a list of items that could have been bought or bartered at a store in Fort Pitt in 1765. (This will be an extension.)
- #5 Analyze two original letters written by Bouquet to Amherst.
- #6 Analyze Thomas Hutchins' Plan of the Battle Near Bushy Run design map and relate it to information in the Bouquet letters.
- #7 Compare the Hutchins' map to a modern map of the Bushy Run Battlefield.

Standards Alignment: History

- 8.2.6. B. Identify and explain primary documents, material artifacts and historic sites important in Pennsylvania history from Beginnings to 1824
8.3.6. B. Identify and explain primary documents, material artifacts and historic sites important in United States history to 1824.

Other Resources: French and Indian Wars full service from marker listings to media resources to teacher's guides at:
<http://explorepahistory.com/story.php?storyId=6>

See also Lesson Plans at <http://explorepahistory.com/viewLesson.php?id=23>:

- [George Washington and the Beginnings of the French and Indian War](#)

- [Bushy Run: A decisive battle of Pontiac's Rebellion](#)
- [National Road Heritage Corridor](#)
Pennsylvania's Historic National Road, this section includes Fort Necessity, General Braddock's Grave, and numerous museums, and historic landmarks.
- [The Story of Oil in Pennsylvania](#)
History of Drake's well from the Paleontological Research Institution

Related Markers <http://explorepahistory.com/viewLesson.php?id=23>

- [Braddock Park](#)
- [Braddock Road \(Dunbar's Camp\)](#)
- [Braddock Road \(Rock Fort Camp\)](#)
- [Braddock Road \(Stewart's Crossing\)](#)
- [Braddock Road \(Twelve Springs Camp\)](#)
- [Braddock's Crossing](#)
- [Braddock's Defeat](#)
- [Fort Duquesne](#)
- [Fort LeBoeuf](#)
- [Fort Necessity](#)
- [Fort Prince George](#)
- [George Washington](#)
- [Gist's Plantation](#)
- [Jumonville Defeat](#)
- [Venango Path](#)
- [Venango Path \(Fort Franklin\)](#)

Books: David Marston, *The Seven Years War* (2001). 96 pages; Fred Anderson, *The Crucible of War* (2001) 912 pages.

E. The Middle Ground: The Indian and Settler Societies of the West

WORLD HISTORY THEME

The concept of the “Middle Ground” is a key aspect in the study by world historians of cultural encounters and exchanges superbly advanced by Richard White in his book, *The Middle Ground: Indians, Empires and Republics in the Great Lakes Region, 1650-1815* (New York Cambridge University Press, 1991), an account of the changes that occurred in native cultures from the time of first European contact through the expulsion of the Indians in the early 19th century. A professor of history at the University of Washington, White focuses on the interaction between the Indians, who were speakers of Algonquin languages, and the French who lived among them, and on the new way of life that evolved from their contact. With elegant clarity, White's introduction explains: "The book is about a search for accommodation and common meaningIt tells how Europeans and Indians met and regarded each other as alien, as other, as virtually nonhuman. It tells how, over the next two centuries, they constructed a common, mutually comprehensible world ... [in which] the older worlds of the Algonquins and of various Europeans overlapped, and their mixture created new systems of meaning and exchange. But finally, the narrative tells of the breakdown of accommodation and common meanings and re-creation of the Indians as alien, as exotic, as other."

"The middle ground" of the title refers to both the geographic area from the Great Lakes to the upper Mississippi basin and the social terrain, "in between cultures, peoples, and in between empires and the nonstate world of the villages" of the Algonquin-European accommodation. White's theme is that this middle ground was not created by interaction between conquerors and conquered or by assimilation of a defeated people. Instead it was the result of adjustments and accommodations made as both the Algonquins and the Europeans

sought benefits from each other and tried to survive new social realities. --From <http://www.lib.niu.edu/1993/ii930734.html>

The history of cultural contact among First Nations and European settlers illuminates this process, which many First Nations embraced. However, this posture not the road pursued during the course European settlement in Pennsylvania, where settlers offer us a textbook case in “settler colonialism,” (see below) which seeks not to build bridges between cultures, but to make the indigenous culture disappear. Students can engage this issue, quite literally, at several sites.

“The very name "Pennsylvania," or "Penn's Woods," implies that the history of this land began only when a famous English Quaker showed up to take possession of a primeval forest in 1682. We know, however, that William Penn and his fellow colonizers encountered native inhabitants upon their arrival who had their own name for this land and their own starting point for its history.”--From <http://explorepahistory.com/story.php?storyId=26&chapter=2>

Introduction

Adapted from <http://explorepahistory.com/story.php?storyId=20&chapter=5>

Originally, the Algonquian tribes who inhabited Pennsylvania enjoyed friendly relations with the early European settlers, especially William Penn, whose proprietorship of the colony marked the beginnings of a unique friendship based on mutual trust and respect. But after his death in 1718, Penn's sons, anxious to enhance their personal wealth and power, cheated the Indians out of their lands through notorious acts like the [Walking Purchase](#) of 1737. Five years later, the Penns allied with Iroquois to drive the Delaware out of their lands in the Susquehanna valley.



Constructed in 1778 to protect the lead ore supplies of the Sinking Spring Valley...
Credit: Library of Congress

During the next fifteen years, the Penn family's alliance with the Iroquois resulted in significant land acquisitions. Settlers moved into Schuylkill, Carbon, Dauphin, Northumberland, Columbia, and Luzerne Counties, pushed west to the Allegheny Mountains, and from Centre County south to the colony's boundary with Maryland. During the [French and Indian War](#), the Delaware and Shawnee, still bitter over the Walking Purchase, attacked frontier settlements to avenge their losses. This undeclared conflict worsened after the end of the war when the Proclamation Line of 1763 prohibited white settlement west of the Appalachian Mountains. In the Susquehanna Valley, Scots-Irish settlers registered their disapproval of Indian neighbors by slaughtering neutral [Conestoga Indians](#) near Lancaster in 1764.



The charismatic chief of the Mohawk, Joseph (Thayendanegea) Brandt led raids...
Credit: Independence National Historical Park

After the Revolutionary War broke out, the simmering hostility towards the Indians became white hot because of the divided allegiances of various tribes. To create a second military front against the rebelling colonies, in May 1776 the British held a conference at Fort Niagara, where they succeeded in gaining the support of many tribes, including many Iroquois and Delaware. To counteract the alliance, the Pennsylvania legislature and the Continental Congress called an Indian conference at [Easton](#) in January, 1777. Although Iroquois gave assurances of their intentions to remain neutral, they conducted sporadic raids across the northern tier of Pennsylvania and in nearly every western county during the next few years. Pennsylvania's northeastern frontier, still divided over the Yankee-Pennamite land conflict, also became a hotly contested battleground between whites and Indians. Savage hit-and-run attacks by joint British and Iroquois forces culminated in a massacre of Pennsylvania militiamen and civilians at the [Battle of Wyoming](#) in July 1778.



This compilation of stories and other sensationalistic accounts of Indian atrocities...
Credit: The Library Company of Philadelphia

Known as the "surpassing horror of the American Revolution," this devastating patriot defeat left the northern frontier open to depredations, and forced Continental authorities to assemble an army large enough to break the power of pro-British Indians. In June of 1779, Gen. John Sullivan assembled 2,500 Continental forces at Easton, and then marched them to Fort Wyoming on the Susquehanna River.

After another month of mobilization and preparation, the army marched up the East Branch of the Susquehanna through Tioga, and into New York. On August 29th, Sullivan's forces defeated Col. John Butler's Rangers and 1,500 Indians under Joseph Brandt at Newtown.

From there, Sullivan marched north, destroying Iroquois towns and all the orchards, fields and crops that surrounded them. [Sullivan's Campaign](#) weakened the eastern tribes so severely that they never seriously threatened Pennsylvania's frontier again. Between 1780 and the end of the war in 1783, Pennsylvania's frontier settlers continued to suffer sporadic raids by Indians, especially in the western counties.

The torture and death of [Colonel William Crawford](#) by the Sandusky Indians in 1782 fueled Pennsylvanians' desire to rid the state of its last native inhabitants. The last threat of Indian resistance would end in 1795, when Gen. Anthony Wayne's victory at the Battle of Fallen Timbers, in present-day Ohio, secured control of Pennsylvania's northwestern territories.

By the end of the war, Pennsylvania had won control of the disputed areas in the northeast, and received title to most of the disputed lands in western Pennsylvania, except for what is now the "panhandle" of West Virginia. The bloody and vicious guerilla warfare that erupted on Pennsylvania's frontiers during the War for American Independence reinforced white racist attitudes towards Native Americans, and emboldened Pennsylvanians to press their land claims on the frontier against Native Americans and neighboring states.

After the war was over, the state also used lands recently held by Indians to pay veterans for their service in the Continental Army. It also sold tens of thousands of acres to enterprising land speculators, who hoped to increase their personal wealth by reselling those lands at a hefty profit. By the 1790s the Commonwealth had also extinguished all Indian claims to their lands within the state.

1. *The Catahecassa Monuments*



Adapted from:

Adapted from: [Hidden ornamental, monument gems tucked within Pittsburgh - Pittsburgh Tribune-Review](http://www.pittsburghlive.com/x/pittsburghtrib/ae/s_635216.html#ixzz1FMt5ugnx) http://www.pittsburghlive.com/x/pittsburghtrib/ae/s_635216.html#ixzz1FMt5ugnx and Access Genealogy at http://www.accessgenealogy.com/native/biographical/catahecassa_principal_chief_sahwanee.htm

Access Genealogy provides an on-line biography offering students grist for analysis, as it praises Indians while endorsing the view of the “savagery” of Indian “tribes”.

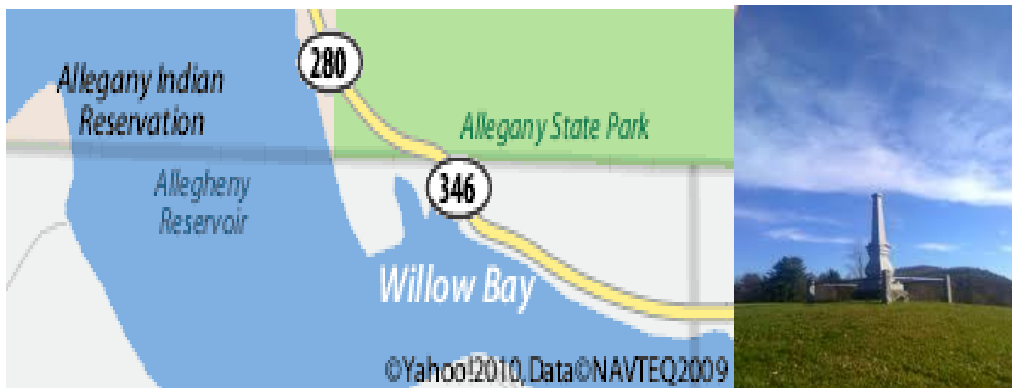
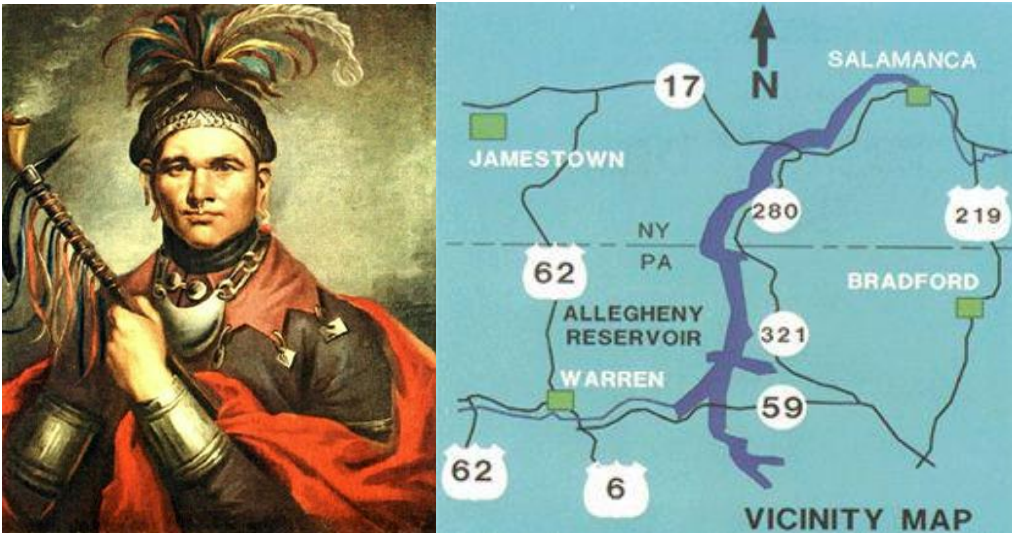
See also: <http://www.hmdb.org/marker.asp?marker=16971>

Introduction

In Schenley Park, an Indian appears at the base of Neill Cabin. He is Black Foot, otherwise known as Catahecassa. Catahecassa was the principal chief of the Shawnee nation and the most famous Shawnee Indian chief. This monument was placed there in 1912. The unknown carver of this granite bas-relief portrait was commissioned by James W. Clark, director of the Department of Public Works, with the balance of the Fourth of July Celebration Fund that same year.

Though, at first, it might not seem to be so, it is a rather fitting tribute to Black Foot that his portrait be placed at the base of the cabin, which was built in 1787. Black Foot (born circa 1740) was an important figure in the French and Indian War (1754-63). He was present at the battle of the Virginia militia under Gen. Andrew Lewis at Point Pleasant in 1774 and at the battle on the Monongahela in 1775, where Gen. Edward Braddock was mortally wounded. When the Indian confederation was finally defeated with the victory of Gen. Anthony Wayne, and peace was signed in August 1795, he was present there also, acting as counselor and orator there and during the greater part of his long life. He was an excellent speaker. The venerable Colonel Johnston, of Piqua describes him as the most graceful Indian he had ever seen, and as possessing the most natural and happy faculty of expressing his ideas. He was well versed in the traditions of his people; no one understood better their peculiar relations to the whites, whose settlements were gradually encroaching on them, or could detail with more minuteness the wrongs with which his nation was afflicted. But although a stern and uncompromising opposition to the whites had formed his policy through a series of forty years, and nerved his arm in a hundred battles, he became at length convinced of the madness of an ineffectual struggle against a vastly superior and hourly increasing foe. No sooner had he satisfied himself of this truth, than he acted upon it with the decision which formed a prominent trait in his character. The temporary success of the Indians in several engagements previous to the campaign of General Wayne, had kept alive their expiring hopes; but their signal defeat by that gallant officer, convinced the more reflecting of their leaders of the desperate character of the conflict. Black Hoof was among those who decided upon making terms with the victorious American commander; and having signed the treaty of 1795, at Greenville, he remained faithful to his stipulations during the remainder of his life. From that day he ceased to be the enemy of the white man; and as he was not one who could act a negative part, he became the firm ally and friend of those against whom his tomahawk had been so long raised in vindictive animosity. He was their friend, not from sympathy, or conviction, but in obedience to a necessity which left no middle course, and under a belief that submission alone could save his tribe from destruction; and having adopted this policy, his sagacity and sense of honor alike forbade a recurrence either to open war or secret hostility.

2. Cornplanter and the Fate of His Land



Location: Allegheny Reservation, Warren and McKean counties, Pennsylvania, and Cattaraugus County, New York. Croydon Cemetery.

Adapted From:

http://www.americanheritage.com/articles/magazine/ah/1968/1/1968_1_4.shtml. This site is essential student reading.

<http://explorepahistory.com/viewLesson.php?id=75>

<http://en.wikipedia.org/wiki/Cornplanter>

http://www.americanheritage.com/articles/magazine/ah/1968/1/1968_1_4.shtml

<http://www.interment.net/flood/pa/kinzua/relocation.htm>

Introduction:

Gaiänt'wakê (Kaintwakon; generally known as **Cornplanter;** c. 1750 – February 18, 1836) was a [Seneca](#) war-chief. He was the son of a Seneca mother, Aliquipiso, and a Dutch father, Johannes Abeel. He also carried the name John Abeel (sometimes spelled O'Bail) after his [fur](#) trader father. He was born at Canawaugus (now in

the [Town of Caledonia](#)) on the [Genesee River](#) in present-day New York State around 1750 and was raised by his mother.^[1]

Cornplanter decided that he would plant crops and live peacefully; hence his English name, Cornplanter. His Seneca name, Gaiänt'wakê (often spelled Gyantwachia), means "the planter," and another variation, Kaintwakon, means "by what one plants." Cornplanter was half-brother to [Handsome Lake](#), a Seneca religious leader of the Iroquois people, and uncle to [Governor Blacksnake](#), a Seneca warchief.

American Revolutionary War

As a war chief, Cornplanter had been hesitant about fighting during the American Revolution. He felt the Iroquois should stay out of the white man's war. "War is war," he told other Iroquois. "Death is death. A fight is a hard business." He finally gave in to pressure and several times helped the British. During the [American Revolution](#), Chief Cornplanter and his uncle, Chief [Guyasutha](#), wanted the [Iroquois](#) to remain neutral, as both the [British](#) and the [American Patriots](#) had originally urged them to. However, soon both sides wanted the [Iroquois](#) to fight with them, and the British offered them large amounts of goods. The Iroquois League met together at [Oswego](#) in July, 1777, to vote on their decision. Although Guysutha and Cornplanter voted for neutrality, when the majority voted to side with the British they both honored the majority decision. Because of the status of the Seneca as War Chiefs among the Iroquois, most of the [Iroquois Confederacy](#) followed suit. The Iroquois named [Sayenqueraghta](#) and Cornplanter as war-chiefs of the Iroquois.

Cornplanter joined forces with [Loyalist](#) Lt. Colonel [John Butler](#) and his [rangers](#) at the 1778 Battle of [Wyoming Valley](#), which came to be known as the [Wyoming Valley Massacre](#).

After the burning of Tioga by Patriot forces under Colonel [Thomas Hartley](#), Cornplanter and [Joseph Brant](#) also participated in the 1778 Loyalist-Iroquois reprisal led by Captain [Walter Butler](#) and [Butler's Rangers](#) in [Cherry Valley](#), later called the [Cherry Valley Massacre](#). During this campaign, Cornplanter's men incidentally captured his father after burning his house. Cornplanter, who had once gone to see him as a young man, recognized him and offered apology, inviting him to return with the Senecas or to go back to his [white](#) family. His father chose the latter, and Cornplanter sent Seneca warriors to take Johannes Abeel there in safety.

After the victories of the Loyalist and Iroquois forces, commander-in-chief General [George Washington](#) commissioned Major General [John Sullivan](#) to invade [Six Nation](#) territory and "destroy" Iroquois villages. There was one brief [battle](#) of this campaign in which the Iroquois and British troops were decisively defeated at [Newtown](#). Sullivan and his army of 5,000 men conducted a [scorched earth](#) campaign, methodically destroying Iroquois villages, farms, and animals between May and September of 1779 throughout the Iroquois homeland (upstate New York). Cornplanter, along with Brant, [Old Smoke](#), and Lt. Colonel [John Butler](#) fought a desperate delaying action in order to allow the escape of many refugees, both Native and non-Native. The Patriot revenge was successful, and those who survived suffered terribly during the following months in what they called "the winter of the deep snow." Many froze or starved to death. Cornplanter's people continued to fight with the British against the Patriots.

Post-Revolutionary War years

After the devastating loss to the Iroquois brought about by the [Sullivan Expedition](#) as well as Britain's final defeat in the war, Cornplanter recognized the advantage of a positive diplomatic relationship with the fledgling government of what the Iroquois called the "Thirteen Fires." He became a negotiator in disputes between the new "Americans" and the Seneca as well as other indigenous tribes, even participating in meetings with both Presidents Washington and [Jefferson](#). He was one of the signers of the [Treaty of Fort Stanwix \(1784\)](#).

During the [Northwest Indian War](#) in [Ohio](#) and [Indiana](#) immediately after the American Revolution, Cornplanter was able to keep the Iroquois neutral and tried to negotiate with the [Shawnee](#) on behalf of the U.S.

In 1790, Cornplanter and his brother [Half-Town](#) (also a chief) traveled to Philadelphia to meet with President George Washington and Pennsylvania Governor Thomas Mifflin and protest the current treatment of their people. Cornplanter and Half-Town extracted an agreement from Washington and Mifflin to protect Iroquois land. [see: *The Speech of the Cornplanter ...*, December 1, 1790, at external links.]

Cornplanter made many trips to the cities to strengthen relationships and dialog with those who were interested in his people. He took it upon himself to understand the ways of the white men, as he saw it necessary for future relations between the Haudenosaunee and Americans. He was particularly impressed by the beliefs and practice of the [Quakers](#), and invited them to educate his son and develop schools. He and his half-brother, the religious leader Handsome Lake, strongly opposed liquor.

During the [War of 1812](#) Cornplanter supported the American cause, convincing his people to do so as well. At one point he offered to bring two hundred warriors to assist the U.S., but his offer was refused.

He allowed Quakers into his village to help the Senecas learn new skills when they could no longer rely on hunting or the fur trade as a way of life. He also encouraged men to join the women working in the fields to help increase their farming economy.

Eventually, Cornplanter became disillusioned with his relationship with the Americans. To help fight the drunkenness and despair experienced by many Indians, his half-brother Handsome Lake preached that the Iroquois must return to the traditional Indian way of life and take part in religious ceremonies. Cornplanter felt his people were receiving increasingly poor treatment at the hands of the Americans, and this confirmed for him Handsome Lake's warning that they should return to tradition and turn away from assimilation to white ways. He burned his military uniform, broke his sword, and destroyed his medals. While he also closed the schools, he never broke off relations with the Quakers and retained a relationships of love and respect with them.

Cornplanter died in Warren County, Pennsylvania, in 1836. He requested a grave with no marker. A monument has been constructed over his grave.

The Cornplanter Tract

In gratitude for his assistance to the state, Cornplanter was given a grant of 1,500 acres (6.1 km²) by [Pennsylvania](#) in 1796 along the western bank of the [Allegheny River](#) (about three miles (5 km) below the southern boundary of New York state) to him and his heirs "forever". By 1798, 400 Seneca lived on the land, which was called the Cornplanter Tract or Cornplanter Grant. In 1821 [Warren County, Pennsylvania](#) attempted to require Cornplanter pay taxes for his land, which he protested on the basis that the land had been "granted" to him by the U.S. government. After much talk, the state finally agreed that the Cornplanter Tract was exempt.

Legacy

Cornplanter's last living direct descendant was Seneca artist and traditionalist, [Jesse Cornplanter](#) (1889–1957).

In 1965, the new [Kinzua Dam](#) at [Warren, Pennsylvania](#) permanently flooded the Cornplanter Tract and created [Allegheny Reservoir](#). Cornplanter's grave was subsequently moved to higher ground; the State of Pennsylvania erected an honorary marker in 1966. Most of Cornplanter's people moved to the [Allegheny Reservation](#) in [New York](#).

The moving of his grave (which conflicted with the promise that his land grant would be his and his heirs "forever") figures in the song, "[As Long As The Grass Shall Grow](#)" that [Johnny Cash](#) recorded in 1964; it was originally written by [Peter LaFarge](#). The [Chief Cornplanter Boy Scout](#) Council, headquartered in Warren, as well as their [Order of the Arrow](#) lodge, [Gyantwachia Lodge #255](#) are named in his honor. [Cornplanter State Forest](#) in [Forest County, Pennsylvania](#) is also named for him and comprises 1,256 acres (5.08 km²) of land

3. Cornplanter and the Fate of His Land: Lesson Plan

Adapted from <http://explorepahistory.com/viewLesson.php?id=75>

[Lesson Description](#)

[Background](#)

[Teacher Resources](#)

[Procedure](#)

[Assessment](#)

[After the Lesson](#)

[Student References](#)

[For Further Study](#)

Teaching Time

2 50-minute sessions

Grade Level

Middle School

Disciplines

* Geography

* Reading, Writing, Speaking and Listening

* Arts and Humanities

* History

Historical Period

* Contemporary Pennsylvania - 1975 to Present

* Post-WWII Pennsylvania - 1946-1974

* New Nation - 1761-1800

* Colonization and Settlement - 1601-1760

In 1796--the year Frederick Bartoli completed the portrait of Chief Cornplanter which your students will interpret in this lesson--Chief Cornplanter was at the height of his influence with the Seneca and with the new United States of America. He had fought with the British in the recently ended American Revolutionary War and had proven himself a strong war chief in several battles. The Seneca, however, as allies with the British, had lost the war. The British had negotiated a separate peace with the new nation, the United States of America, and made no provision for their Native American allies. As one of the chief negotiators, Cornplanter believed that the Seneca must make peace at any cost. During these negotiations, the first of which was the Treaty of Fort Stanwix in 1784, the Seneca were forced to concede vast amounts of their native lands to the Americans to secure a lasting peace. The Americans respected Cornplanter for his honesty, principles, and ability as a negotiator. He made many personal allies including George Washington, Thomas Jefferson, and Thomas Mifflin. He would later be rewarded with land in Pennsylvania that was to remain in his family for "perpetuity." As time unfolded, however, this was not to be. Cornplanter's land, located in the Allegheny Valley near the Pennsylvania/New York state line, became the subject of a controversial land rights court case in the late 1950s when the United States Army Corps of Engineers made plans to build a dam downriver for flood control. This dam would effectively flood 10,000 acres of Cornplanter's land and force the relocation of 550 Seneca families.

In a Supreme Court ruling, the Army Corps of Engineers was given permission to go ahead with the project based on "the right of eminent domain." The Seneca relocated to New York and the Kinzua Dam is now a presence in the Allegheny Valley, providing flood control, hydroelectricity, and recreation.

In this lesson your students are going to explore the following questions:

- Who is Cornplanter?
- Why was he given a tract of land?
- Where was this land?
- What happened to the land?
- To what extent did the Supreme Court decision provide justice?

Objectives

Students will be able to:

1. Interpret Cornplanter through a work of art.
2. Understand Cornplanter's contribution to Pennsylvania history.
3. Locate Cornplanter's tract of land.
4. Comprehend different perspectives of the controversial building of the Kinzua Dam (and through this example, larger land/water rights issues).
5. Use primary sources to effectively argue a perspective.
6. Work cooperatively as a group to prepare debate points.
7. Decide which perspective with which they were persuaded to agree.

Standards Alignment

* Arts and Humanities

- 9.2.8. A. Explain the historical, cultural, and social context of an individual work in the arts.
- 9.2.8. D. Analyze a work of art from its historical and cultural perspective.

* Geography

- 7.1.6. B. Describe and locate places and regions.
- 7.3.6.B. Describe the human characteristics of places and regions by their cultural characteristics.
- 7.4.6. A. Describe the impacts of physical systems on people

* History

- 8.1.6. B. Explain and analyze historical sources.
- 8.2.6 D. Identifies conflicts and cooperation among social groups and organizations in Pennsylvania history from beginnings to 1824
- 8.2.6. A. Identifies political and cultural contributions of individuals to Pennsylvania history
- 8.2.6. B. Identify and explain primary documents, material artifacts and historic sites important in Pennsylvania history from Beginnings to 1824
- 8.2.6. C. Identify how continuity and change have influenced settlement patterns (e.g. Development of towns)
- 8.3.6. A. Identify and explain the political and cultural contributions of individuals and groups to United States history from Beginnings to 1824
- 8.3.6. B. Identify and explain primary documents, material artifacts and historic sites important in United States history from Beginnings to 1824.
- 8.3.6. C. Explain how continuity and change has influenced United States history.
- 8.3.6. D. Identify conflict and cooperation among groups.

4. Queen Alliguippa

Marker Details



Name: Queen Aliquippa

Region: Pittsburgh Region

County Location: Allegheny

Marker Location: Highland Grove Park, between Highland and Bowman Avenues, McKeesport

Dedication Date: October 26, 2003

Marker Text

An influential leader of the Seneca Nation in this area and ally of the British during the time of the French and Indian War. Encamped near here when George Washington paid respects to her, 1753. Died, 1754; according to legend, buried nearby.



Behind the Marker



In fall 1753, a twenty-one-year-old Virginia militia officer named George Washington journeyed into the Ohio Country to inform French soldiers there that they were encroaching on British territory. The young Washington kept a journal of his three-month trip, recording his impressions of the British fur traders, French military officers, and Indians he met along the way. In one such passage, he mentioned visiting "Queen Aliquippa . . . I made her a Present of a Matchcoat and a Bottle of Rum, which latter was thought much the best Present of the two." Who exactly was Queen Aliquippa, and why did the young militia officer feel it necessary to pay his respects to her, even as he insinuated that she was more interested in drinking than diplomacy?



Enlarge 

There is no image of Queen Aliquippa from her lifetime, but this eighteenth-century...

Credit: Courtesy of the New York Historical Society

Unfortunately, we know very little about this woman. Besides Washington's mention of her, there are two other tantalizing references to her in contemporary sources.  [Conrad Weiser](#) met her during a journey to  [Logstown](#) in 1748. In his journal, he mentioned stopping at an Indian town "where an old Seneca woman reigns with great authority." During his stay at Logstown, Weiser was visited by the "old Sinicker [Seneca] Queen" again, this time because she wanted to know what had happened to a message she had sent to Philadelphia. Weiser knew nothing of the message, but gave her a shirt, pipe, and tobacco as presents. She seemed displeased, "because I took not sufficient notice of her in coming down [to Logstown]." The French officer Pierre-Joseph Céloron de Blainville, when he led a military expedition into the Ohio Country in 1748-49, also recorded an encounter with Aliquippa, calling her "an old woman" who was "devoted to the English" and considered herself "sovereign" over the town in which she lived.

What we can gather from these references by Washington, Weiser, and Céloron is that Aliquippa was an old Seneca woman widely regarded as a person of influence and power by Indians and colonists alike. While colonists may have referred to her as a "queen" in the same manner that they referred to male Indian chiefs as "kings" and Indian villages as "castles," scholars today would call her a clan matron. Like many other Indian nations in northeastern America, the Iroquois followed matrilineal kinship patterns. That is to say, they determined their relations according to their mother's side of the family. Several related lineages, or extended families, would make up a clan, and the elder women of the clan would exercise considerable political influence over the members of that clan, giving them approval to go to war or to make peace and determining the fate of captives brought back by war parties. The accounts of Washington, Weiser, and Céloron indicate clearly that Aliquippa and her neighbors considered her a locally powerful woman. Colonial agents and officers felt compelled to retain her good graces, and she felt affronted if their gifts did not properly reflect her status. This power probably derived from her role in the founding of the Indian community known as Aliquippa's Town. Aliquippa's Town was first identified in a 1731 report by Pennsylvania fur traders on the Indians living in the Allegheny Valley. At that time, Aliquippa's Town had only four families, and it was the only Seneca village among the surrounding Delaware and Shawnee communities. However, the report described the town as a "great resort of those [Seneca] people," suggesting that Seneca and other Iroquois stopped there when passing through the region to hunt, trade, or make war farther west and south.

Over the next twenty years, the pace of Iroquois migration into the Allegheny-Ohio Valley increased. While all of the Iroquois nations were represented among this growing population, the Seneca predominated. As the westernmost Iroquois nation, they were the closest to the Allegheny-Ohio Valley, and they had strong ties with the French who had established Fort Niagara and other trading posts in the Great Lakes region. As Seneca participation in the fur trade expanded, their movement in the Ohio Country made perfect sense because of its ready supply of fur-bearing animals.

Back in Onondaga, the seat of the Iroquois Confederacy near modern Syracuse, New York, Iroquois chiefs claimed authority over the Ohio Valley's land and people, but the Iroquois who moved to places like Aliquippa's Town lived independently, recognizing no authority in their affairs higher than their own village councils. This autonomy is what made Aliquippa such a locally powerful person in the Ohio Country. Outsiders like Washington, Weiser, and Céloron had to curry her favor because she held immediate influence over the Iroquois men with whom they were seeking trade and alliance. By all reports, Aliquippa appears to have been pro-British. Even though the Seneca had longstanding connections to the French, by the 1730s and 1740s, Pennsylvania fur traders brought less expensive and more plentiful trade goods into the Ohio Country. When colonial agents like Weiser and Washington arrived in this region, Aliquippa expected to be part of the negotiations of alliance, thereby preserving her power and extending her network of influence.

Like many other Ohio Indians, Aliquippa paid dearly for her alliance with the British during the contentious years of 1753-54. After Washington's defeat by French forces at Fort Necessity in July 1754, she and other pro-British Indians moved to Aughwick, where Pennsylvania Indian trader and agent George Croghan kept a fortified post. She died there before the end of the year.

Her son, a Seneca war captain known as "Newcastle" among Anglo-Americans, continued in her footsteps as a mediator between Indians and colonists, but his career was short-lived. After making two peace embassies among Indians in the northern Susquehanna Valley and Iroquois country in 1756, Newcastle fell ill and died in Philadelphia during treaty negotiations he was helping to conduct. By his request, he was laid to rest in the city's Quaker burial ground.

F. Daily Life in a Settler Society



WORLD HISTORY THEME

Settler colonialism is a specific colonial formation whereby foreign family units move into a region and reproduce. Land is thus the key resource in settler colonies, whereas natural (e.g. spices, cotton, oil) and human (e.g. labor, existing trade networks, convertible souls) resources are the main motivation behind other forms of colonialism. Colonialism typically ends, whereas settler colonialism lasts forever, except in the rare event of complete evacuation, or settler **decolonization**. The historian of race and settler colonialism **Patrick Wolfe** writes "settler colonialism destroys to replace", and insists that "invasion," in settler colonial contexts, is "a structure, not an event."

Settler colonialism is a global and transnational phenomenon, and as much a thing of the past as a thing of the present. There is no such thing as neo-settler colonialism or post-settler colonialism because settler colonialism is a resilient formation that rarely ends. Not all migrants are settlers: settlers come to stay, and are founders of political orders who carry with them a distinct sovereign capacity. And settler colonialism is not colonialism: settlers want Indigenous people to vanish (but can make use of their labor before they are made to disappear). Sometimes settler colonial forms operate within colonial ones, sometimes they subvert them, sometimes they replace them. But even if colonialism and settler colonialism interpenetrate and overlap, they remain separate as they co-define each other.

--http://en.wikipedia.org/wiki/Settler_colonialism

Virtually all Pennsylvania historical sites that have a settler focus, elide, gloss over, or delete Indian settlements, as white settlers, even though they travel along Indian roads and canoe-routes, are "blazing new trails, building houses, taming the land etc. as if no Indian farm sites or dwellings existed. What to Indians was a holocaust, settlers call "The Westward Movement." This should not be dismissed as Eurocentrism—Shaka's Zulus may have practiced even stronger forms of erasure. The larger processes at work should be our focus, not merely white guilt. Those larger processes include mercantilism and later capitalism, ideas of racial dominance rooted, for Anglican British settlers, in the conquest of Ireland, and, for American settlers later in concepts of Manifest Destiny and social Darwinism, which American followers of Herbert Spencer, many churchmen, personally introduced into their congregations and public associations. In Pennsylvania, this process can be illuminated in a positive way, so to speak, in the immense efforts Indian populations sought to find a middle ground between extinction and armed resistance. In a negative way, it can be shown in exhibits that talk about settler life as if Indians were no part of it—no intermarriage, no learning of technology, etc.

The following is adapted from:

Colonial Pennsylvania <http://www.cybrary.org/colonial.htm>

- [Social studies for kids](#)
- [PHMC Outline of Pa. history](#)
- [13 Originals](#)

1. Whose Land Is It Anyway? Conflict and Cooperation in the French & Indian War.

Lesson Plan From: [Worlds in Motion: American Indians on the Colonial Frontier](#)

Abstract: This unit incorporates time periods from both the Early American (to 1630) and the Colonial Period (1630 – 1763). It delves into the land claims made during the Early American time period to set up the conflict and cooperation that will occur during the French and Indian War in the Colonial Period.

By integrating the story of eastern American Indians into our nation's history, these lessons and resources share historical knowledge that will dispel a core body of myths and expand perceptions of eastern American Indians and their role in colonial history and the founding of the United States. Other lessons at <http://www.worldsinmotion.org/curricula/high-school/>

- Elementary School
 - [Captivity Curriculum](#)
 - [Mission Impossible](#)
 - [Picture Analysis: Conflict & Cooperation in the French & Indian War](#)
- Middle School
 - [A Historical Investigation of the French and Indian War](#)
 - [Barter to Market](#)
 - [Breaking Down Misconceptions about Eastern Woodland Indians](#)
 - [Native American History Database](#)
 - [Picture Analysis: Conflict & Cooperation in the French & Indian War](#)
 - [Smithsonian Artifact Auction](#)
 - [Technology Lesson - Kill or Cure | Conflict and Cooperation in the French and Indian War](#)
- High School
 - [Barter to Market](#)
 - [Picture Analysis: Conflict & Cooperation in the French & Indian War](#)
 - [Trial of George Washington](#)
 - [Understanding Points of View](#)
 - [Whose Land Is It Anyway? Conflict and Cooperation in the French & Indian War.](#)

Other sites:

[McConnell's Mill State Park](#): Tours of the restored rolling gristmill and covered bridge at McConnell's Mill state park are only part of the adventure. There is also striking scenery, gorgeous hiking trails, whitewater boating and two rock climbing and rappelling areas.

[Nemacolin Castle](#): This tudor style house with octagonal tower and battlements has 22 furnished rooms showing the stages of change from trading post to castle. Learn about tours and upcoming events.

[Old Bedford Village](#): This Bedford County living history museum and Native American settlement helps visitors experience what pioneer life was like in 18th and 19th century Pennsylvania. Tour the log cabins and exhibits, or enjoy military and civilian re-enactments, colonial craft demonstrations and classes, and festivals.

[Old Economy Village](#): This six-acre National Historic Landmark in Ambridge, PA, is the restored 19th century home of the Harmonists, a communal Christian society led to Pennsylvania from Germany by George Rapp in search of religious, social and economic freedom. Restored buildings and more than 16,000 preserved artifacts tell their story.

[Oliver Miller Homestead](#): This old stone farmhouse, nestled among the trees at South Park in Allegheny County, is a pioneer landmark and Whiskey Rebellion site.

[Woodville Plantation - Neville House](#): The only surviving 18th-century mansion house and garden in Allegheny County, Woodville Plantation was the home of John Neville, collector of the hated federal excise tax on whiskey, and a major target in the Whiskey Rebellion of 1794.

G. The Abolition of Slavery

WORLD HISTORICAL THEME

Introduction

In [western Europe](#) and the [Americas](#) abolitionism was a movement to end the [slave trade](#) and set slaves free. At the behest of [Dominican](#) priest [Bartolomé de las Casas](#) who was shocked at the treatment of natives in the New World, Spain enacted [the first European law abolishing colonial slavery](#) in 1542, although it was not to last (to 1545). In the 17th century, [Quaker](#) and evangelical religious groups condemned it as un-Christian; in the 18th century, rationalist thinkers of the [Enlightenment](#) criticized it for violating the rights of man. Though anti-slavery sentiments were widespread by the late 18th century, they had little immediate effect on the centers of slavery: the [West Indies](#), South America, and the Southern United States. The [Somerset's case](#) in 1772 that emancipated slaves in England, helped launch the movement to abolish slavery. [Pennsylvania](#) passed [An Act for the Gradual Abolition of Slavery](#) in 1780. Britain banned the importation of [African slaves](#) in its colonies in 1807, and the United States followed in 1808. Britain abolished slavery throughout the [British Empire](#) with the [Slavery Abolition Act 1833](#), the [French colonies](#) abolished it 15 years later, while slavery in the United States was abolished in 1865 with the [13th Amendment to the U.S. Constitution](#) - <http://en.wikipedia.org/wiki/Abolitionism>

Outstanding video presentation on slavery in Pittsburgh in the 18th and 19th centuries from the University of Pittsburgh at: <http://www.library.pitt.edu/freetatlast/abolition.html>

Adapted from: <http://www.hsp.org/default.aspx?id=822>

Deep background: The Pennsylvania Abolition Society: Restoring a Group to Glory by by Richard S. Newman



“It is the nature of great events to obscure the great events that came before them,” the noted 19th-century historian Francis Parkman once wrote. There is no need to tell that to the Pennsylvania Abolition Society (PAS). Once the leading abolitionist organization in the world, the PAS was eclipsed by a more radical (and media-conscious) brand of abolitionism in the years leading to the Civil War. Everyone knows *those* abolitionists: William Lloyd Garrison, Frederick Douglass, Lydia Maria Child. Just a couple of generations ago scholars thought these ultraradical reformers even caused the Civil War! And what of the PAS? It rates barely a mention even in textbooks dedicated to the struggle against slavery.

This omission is truly unfortunate. For the PAS was not only the first abolition society anywhere in the western world, it has remained active ever since its organization in 1775. Now that is dedication to the cause of racial justice. But longevity is only one reason to look again at the PAS, for the group not only helped secure and protect

abolitionist laws in Pennsylvania during America's revolutionary years but its members consistently attacked slavery in an age when many American statesmen hoped to avoid the sensitive and divisive issue. Silence on slavery is golden, George Washington observed when Pennsylvania abolitionists issued the first antislavery petitions to Congress in 1790. America is better than that, the PAS constantly replied. In the words of famed black minister Richard Allen, the PAS was "the friend of those who hath no helper."

Teachers' Page: Pennsylvania Abolition Society

Founded in 1775 at the Rising Sun Tavern in Philadelphia, Society for the "Relief for Free Negroes unlawfully held in Bondage," renamed the Pennsylvania Abolition Society (PAS), is the oldest abolition society in the U.S. Reorganized in the 1780s to include a third mission: "improving the Condition of the African Race," PAS worked not only to assist enslaved persons and advocate for an end to slavery, it also promoted education, employment, and assistance to the free African American community in Philadelphia. As such, its papers, held in custody at HSP, provide a powerful lens into the struggle against slavery and the issues facing free people of color, illuminating issues of rights and race in antebellum America.

The Pennsylvania Abolition Society continues as an active organization today and continues its educational mission by supporting projects such as these pages, which contain online teaching materials based on primary sources from the PAS collection. Materials – primary source materials, lesson plans, readings and other online resources – focus on these major themes:

1. [Building a Movement: Strategies for Social Change in the Abolition Movement](#)
2. [PAS and Philadelphia's Free Black Community](#)
3. [Fugitive Slaves and the Underground Railroad](#)

These materials were made possible with generous support from the Pennsylvania Abolition Society, the National Underground Railroad Network to Freedom, the Lindback Foundation, and the Pennsylvania Department of Education.

1. The Latta Stone House Latta Stone House circa 1900

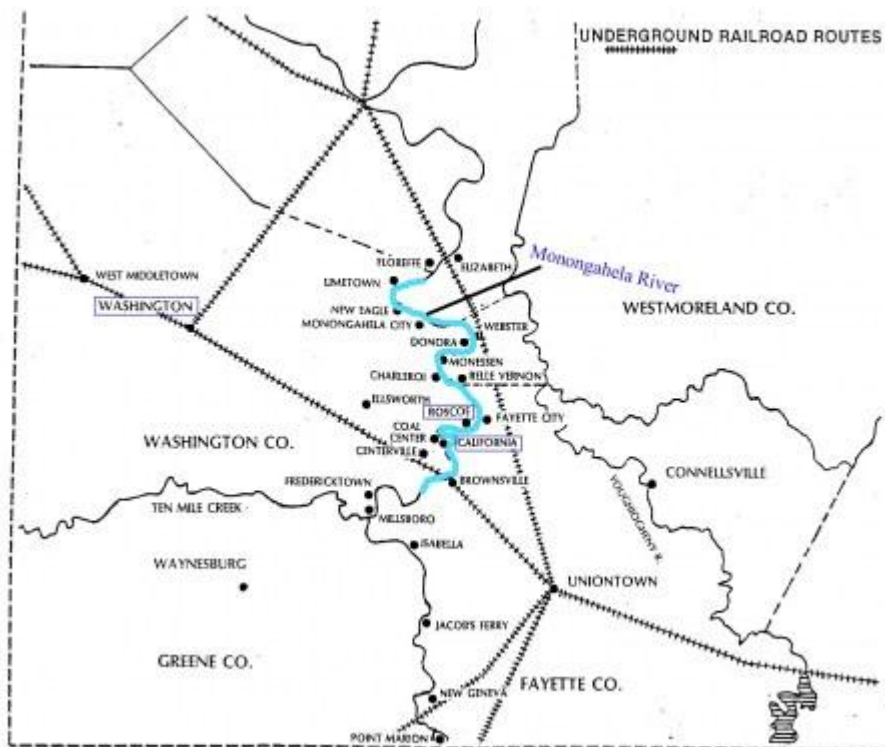


Adapted from <http://louputnam.wordpress.com/2009/10/03/underground-railroad-routes-western-pa/>

[Underground Railroad routes – western PA](#)

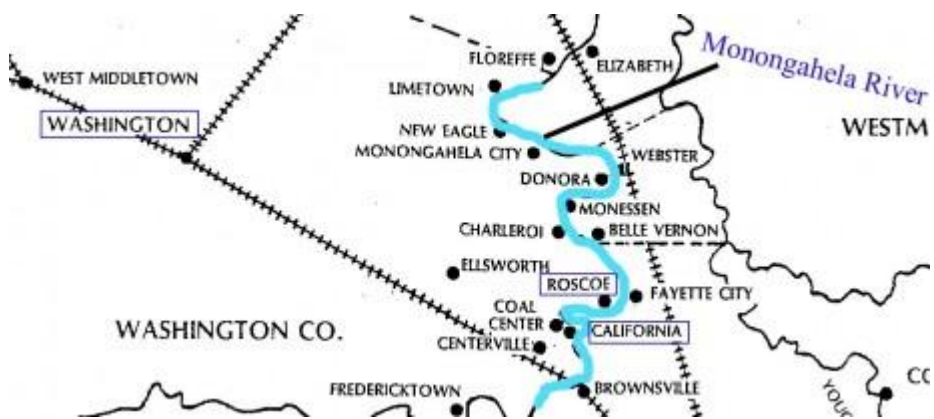
A map of the routes supposedly taken by fugitive slave in western Pennsylvania at the California Area Historical Society. Oct 3, 2009 ... *Underground Railroad routes – western PA*. incl. map of fugitive slave routes

(Underground Railroad—Western Pennsylvania Freedom Trail <http://www.pagreatlakes.com/underground/sitemaritimuseum.html>)



Routes in western PA - Underground Railroad

A close up version shows the proximity of where the Latta Stone House is located – Roscoe - and the city of Washington where the LeMoyné House is located.



Close up of routes - Roscoe to Washington, PA

- - [Contact Info](#)
- Recent Posts
 - [Logistics of Quilts as Codes](#)
 - [Times Passages](#)
 - [New connection, new insights to California, PA UGRR site](#)
 - [Uniontown, PA and Martin Luther King Jr.](#)
 - [Rankin House – Ripley, OH](#)
- Categories
 - [Commentary](#)
 - [Family History](#)
 - [Links](#)
 - [Photos](#)

- [Resources](#)
- [Slavery description](#)
- [Stations](#)
 - [1st Station – Maps](#)
 - [2nd Station – Key People](#)
 - [3rd Station – Places and Transport Modes](#)
 - [4th Station – Churches and Preachers](#)
 - [5th Station – Laws and Proclamation](#)
 - [6th Station – Myths and Ideology of the UGRR](#)
 - [7th Station – People I've met along this journey](#)
- [Trips](#)
- [Videos](#)
- Blogroll
 - [Artist KM Crab](#)
 - [Nancy White – foodie](#)
- Resources
 - [Kennett Underground Railroad Center](#)
 - [Abolition of the Slave Trade – NY Public Library](#)
 - [Levi Coffin House website](#)
 - [National Underground Railroad Freedom Center](#)
 - [Underground Railroad Institute at Georgetown College](#)

Student Visit [follow up](#)

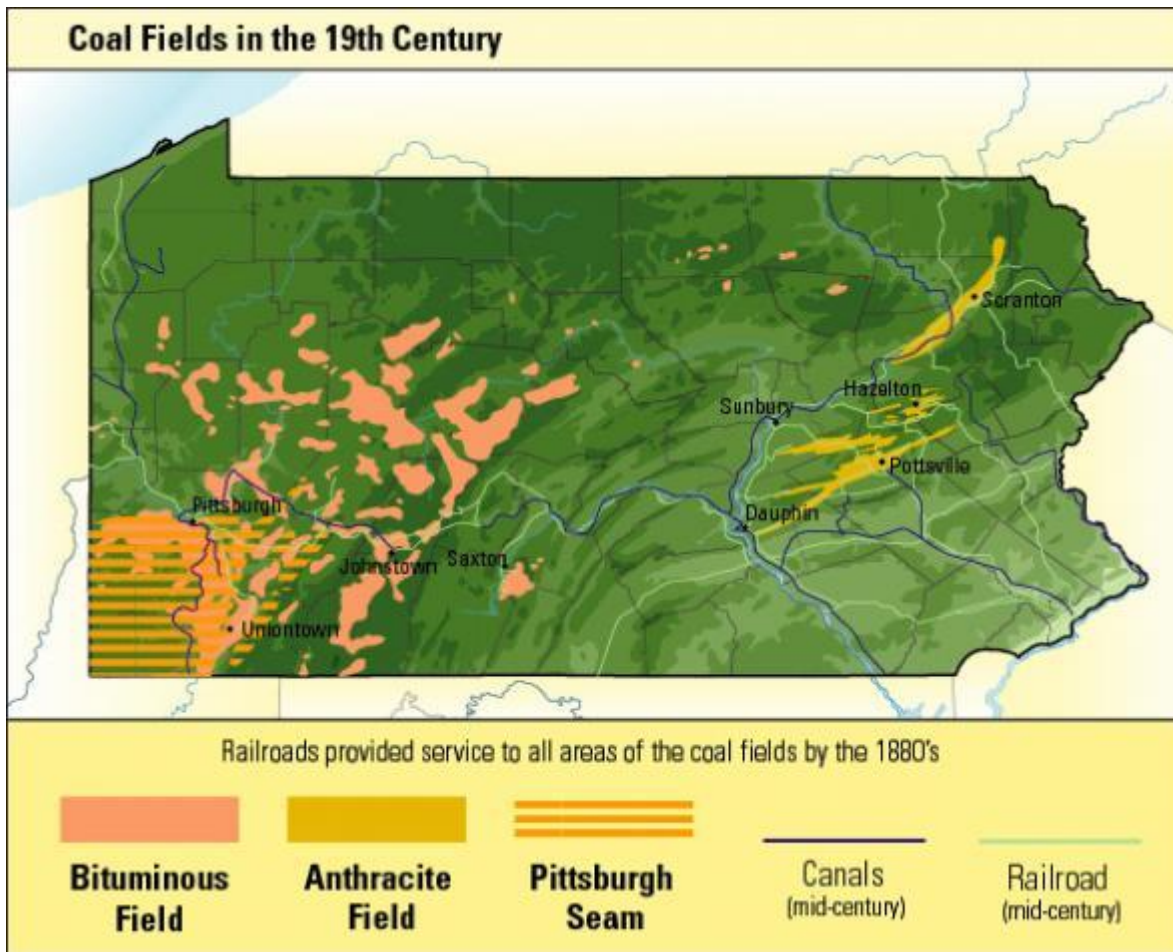
Last September I contacted the Heinz History Center in Pittsburgh, PA as a possible resource for my project since I heard they were working on an exhibition – Western Pennsylvania and the Underground Railroad. At that time I spoke with Art Louderback, the center's chief librarian who suggested I speak with the curator of that exhibit, Samuel Black as well as a history professor at University of Pittsburgh, Dr. Laurence Glasco. Since I've put the title search in the hands of someone else, I decided to explore the area's resources on the Underground Railroad. On Friday, January 29, 2010 I called Dr. Glasco's office and briefly explained what I was trying to do – namely search for information that could lead to the conclusion the Latta stone house could have been a stop on the Underground Railroad. I asked when a good time to talk about this and he suggested the next day.

I caught up with Dr. Glasco on January 30th and had a nice discussion. Dr. Glasco told me he was more knowledgeable about 20th century blacks in Pittsburgh than in the area and century I was researching. **He co-authored WPA History of the Negro in Pittsburgh (2004)**. He mentioned the Heinz exhibit "[Free at Last?](#)" that just ended in October 2009 but directed me to the University of Pittsburgh site saying that it was in their [digital collection](#). Although Dr. Glasco area of expertise was not in the area I needed, he did give me names of other individuals to contact. He suggested Marilyn Holt at the Carnegie Library of Pittsburgh (412) 622-3154. She is head of the Pennsylvania department and genealogy at the library. He thought she could help with information the owner of the house as well as its neighbors. In regards to finding court cases involving abolitionists being tried for helping fugitive slaves, Dr. Glasco suggested contacting Paul Finkleman (pfink@albanylaw.edu) whose background involves slavery and the law. For the Roscoe area and information on historical preservation, Dr. Glasco suggested I contact Carmen DiCiccio. A quick Google search on Dr. DiCiccio told me he taught history at the University of Pittsburgh and at Carlow University in Pittsburgh and his latest book is [Coal and Coke in Pennsylvania](#).

Pennsylvania sources

<http://www.phmc.state.pa.us/ppet/underground/page1.asp?secid=31>
<http://www.phmc.state.pa.us/bhsm/trailofhistory.asp?secid=14>
 Historic sites and museums
<http://www.afrolumens.org/ugrr/>
 Central Pennsylvania African American history
<http://www.explorepahistory.com/story.php?storyId=8>
 Underground Railroad history in PA
<http://www.cwurmuseum.org/>
 Civil War and Underground Railroad Museum of Philadelphia
<http://midatlantic.rootsweb.com/padutch/urailroad.html>
 Underground RR sites: <http://livingtheundergroundrailroad.com/lte.html>
 Living the Experience
http://undergroundrr.kennett.net/Kennett_UGRR

H. The Industrial Revolution: Coal, Canals, Labor and Deindustrialization



"Coal is to the world of industry what sun is to the natural world."

WORLD HISTORY THEME

Industrialization is the process of social and economic change that transforms a human group from an agrarian society into an industrial one. It is a part of a wider modernisation process, where social change and economic development are closely related with technological innovation, particularly with the development of large-scale energy and metallurgy production. It is the extensive organization of an economy for the purpose of manufacturing. Industrialisation also introduces a form of [philosophical](#) change where people obtain a different attitude towards their perception of [nature](#), and a [sociological](#) process of ubiquitous [rationalisation](#). -- <http://en.wikipedia.org/wiki/Industrialisation>

Introduction

Adapted from <http://pittsburgh.about.com/cs/coal/>

Coal was critical to the United States' industrial revolution. By the late nineteenth century it replaced wood as the preferred fuel for powering factories, locomotives, and ships, and displaced wood for home heating in the northeastern United States. In 1874 a coal miner stressed how central coal and miners' work

had become, "I hope to see the miners of America realize that... they are foremost in producing wealth, that ... millions of firesides of rich and poor must be supplied by our labor, that the magnificent steamer that ploughs the ocean, rivers and lakes, the locomotive, whose shrill whistle echoes and re-echoes from Maine to California, the rolling mills, the cotton mills, the flour mills, the world's entire machinery, is moved, propelled by our labor." Mine owners and miners made Pennsylvania the nation's leading coal producer. Virtually all of the country's anthracite coal came from Pennsylvania, and anthracite production dominated the Commonwealth's coal output for most of the nineteenth century. In 1897 western Pennsylvania's bituminous mines surpassed anthracite production. The Keystone state led the nation in mining bituminous coal until the 1930s.



A coal car known as a "wagon" was used to haul raw coal from the mines to the...

Credit: Courtesy of the Historical Society of Western Pennsylvania

Bituminous mining began on a small scale in southwestern Pennsylvania during the mid-eighteenth century. During the mid- and late nineteenth century the industry grew enormously, greatly increasing output and the numbers of mines and workers. Thousands of people settled in western Pennsylvania to labor at mines and coke works, greatly increasing the local population. **At first American-born and British immigrant miners dominated the labor force, but during the late nineteenth and early twentieth century, thousands of eastern and southern European immigrants provided cheap, mostly unskilled labor for the burgeoning industry.** Since operators usually opened mines in rural areas, they built dozens of towns or "coal patches" to house workers and their families. A coal patch reflected the occupational hierarchy and ethnic composition of the work force. A coal company constructed the best houses for mine supervisors and erected cheaper housing for workers. Different ethnic groups often settled in their own neighborhoods in larger coal patches. Coal miners' wages financed local businesses, including company stores that were centerpieces of many company towns.



Coke ovens, tipple, Leisenring #2

Credit: Courtesy of Coal and Coke Heritage Center, Penn State Fayette, www.coalandcokepsu.org/

Operators tightly controlled most mines and patch towns during the late nineteenth and early twentieth century. They had power over families' personal lives to a degree not found in most other Pennsylvania communities. They typically controlled employment, housing, local government officials, and most businesses in coal patches, as well as private police that patrolled towns. **Operators also reduced wages to meet growing competition for shrinking markets, particularly during the 1920s. Most employers saw workers as a production cost to be cut as well as controlled. When miners went on strike or tried to organize unions,**

operators fought back hard by firing workers, bringing in strikebreakers to replace them, using private police to protect mine property and strikebreakers, and evicting miners and their families from company housing.



Coke Drawer and Wooden Wheelbarrow filled with Coke.

Credit: Courtesy of Coal and Coke Heritage Center, Penn State Fayette, www.coalandcokepsu.org/

Men and boys worked in the mines primarily to support themselves and their families. Alex Whoolery recounted, "I was forced to go [into the mines] because my dad was failing in health, and we had a large family of ten." Jerry Schuessler's father went to work at Moorewood Mine in the 1890s and later in Bittner. Schuessler explained why he followed his father into the mines. "My dad worked in a coal mine, and if you lived in a patch, you naturally went into the coal mine. Kids in those days [around 1920]—if the father worked in the mine—they went into the coal mine. Never any question about it!" Work in the mines was hard and dangerous. Between 1877 and 1940, 18,000 men and boys died in Pennsylvania bituminous mines. Workers blamed operators for bad working conditions and low wages. Workers and employers viewed each other with hostility and distrust by the late nineteenth century.

Miners went on strike and organized to gain better pay and working conditions and more power in the work place and patch town. **Miners from Pennsylvania and other states formed the United Mine Workers of America (UMWA) in 1890. This union staged a nationwide strike in 1897 and won recognition as the collective bargaining agent for miners at many bituminous mines in western Pennsylvania and other northern states. Between then and 1924, the UMWA organized anthracite workers in eastern Pennsylvania and gained pay raises and a shorter hours for miners.** The UMWA became the largest and most powerful union in the United States. However, during the mid-1920s, many Pennsylvania operators abrogated their contract with the UMWA and cut wages in order to meet competition especially from nonunion mines with lower wage rates in southern states. The UMWA rebounded greatly after 1933 with passage of federal legislation that supported unionization.

1. The Colonia Mexicana of Bethlehem Steel

Adapted from <http://www.hsp.org/default.aspx?id=922>, **Teachers' Page: The Colonia Mexicana of Bethlehem Steel** by Jennifer Coval, and **Window on the Collections: La Prensa and the Mexican Workers of Bethlehem Steel**

by Melissa M. Mandell



Bethlehem Steel relied upon the unskilled labor of eastern and southern European immigrants in the early 20th century; however, immigration quotas in 1921 led the company to seek an alternate labor source from Mexico. The open border in the southwestern United States as well as the economic and social depression following the Mexican Revolution led to an increase in Mexican migration. The Mexican government, in an attempt to protect the growing number of its citizens engaged in American industries, required that employers draft labor contracts stipulating the terms and conditions of employment. Recruitment from Mexico could not take place without this labor agreement. Bethlehem Steel drafted a labor contract in 1923 with the Mexican Consulate for the importation of its new immigrant workforce. In April and May of that year, trains carrying 917 laborers departed from San Antonio, Texas, for the steel mills of Bethlehem, Pennsylvania. This unit explores the role of Mexican labor in Bethlehem and allows students to compare an early 20th century case of Mexican immigration with contemporary debates.

[Introduction](#)

[Lesson Overview](#)

[Activities Overview](#)

[Activity One](#)

[Activity Two](#)

[Glossary](#)

[Resources](#)

[Lesson Overview](#)

[Skill Objectives](#)

[Content Objectives](#)

Teaching Time: Two 50 minute periods

Grade Level: Middle School to High School

Historical Periods Addressed: Twentieth Century Pennsylvania and United States History

Disciplines Encompassed: History, Reading and Writing, Geography, and Arts and Humanities

Further Site Visit locales and Supporting Resources:

For articles on history of Bethlehem Steel, see <http://www.hsp.org/default.aspx?id=943>

For the Coal and Coke Trail, see <http://www.trailink.com/trail/coal--coke-trail.aspx>,
<http://www.hsp.org/default.aspx?id=943>

See also:

[The Everyday Life of a Coal Mining Company Town](#)

Master's thesis by Susan Ferrandiz tells the story of the coal town of McIntyre, Pennsylvania from 1910 - 1947 including history, miners, the Union, family and town life, education, religion and recreation. Includes photos, documents, memories of current and former McIntyre residents and links to McIntyre surnames.

[What Coal Miners Do](#)

Learn about the dangers and hardships faced by coal miners and explore the different types of coal mines. From the United Mine Workers Association.

[Coal Dust - The Early Mining Industry of Indiana County](#)

A wonderful collection of articles, by Eileen Mountjoy Cooper, explores Indiana County coal mining history. From the Special Collections of Indiana University of Pennsylvania (IUP).

[Colver Coal Mine, Cambria County, Pennsylvania](#)

Dedicated to the memories of the miners and railroad workers who lived and worked in Colver and the surrounding Cambria County, Pennsylvania communities, this site offers great historical information, descriptions and photos of life in the coal mining town.

[State Standards](#)

[Mine Fire of Centralia, Pennsylvania](#)

Documentation of the underground mine fire, ignited in 1961, that destroyed the small coal mining town of Centralia, Pennsylvania. Forty years and forty million dollars later the mine fire still burns, and a few die-hard coal miners are all that is left of the town.

[Harwick Mine Disaster](#)

The story of a massive explosion on January 25, 1904, in a coal mine at Harwick, Pa., near Pittsburgh, which claimed 181 lives, and how it prompted the birth of the *Carnegie Hero Fund Commission*.

[The Hazards of 19th Century Coal Mining](#)

Coal mining was one of the most hazardous occupations in existence in 19th century America.

[Marianna Mine Disaster](#)

A collection of transcriptions of newspaper articles on the 1908 Marianna Mine explosion which killed 129 coal miners.

[Mine Accidents in Pennsylvania](#)

Listing of records available from the Pennsylvania State Archives with information on mining accidents, investigations, and other correspondence. Pennsylvania Department of Mines and Mineral Industries.

[The Overthrow of the Molly Maguires](#)

A lurid 1894 account of the Molly Maguire organization and their criminal actions in Pennsylvania coal country.

[Pictorial Essay on Coal Mining](#)

The Ohio State University History Department's project entitled Pictorial Essay on Coal-Mining in the 19th-Century United States includes many photos of miners and their families going about their daily lives outside of the mines; w/photos

[The Pittsburgh Coal Mining Institute of America](#)

This organization promotes education, mine safety and health.

[Tour-Ed Mine & Museum](#)

Take an educational tour through this Tarentum mine where experienced miners give live demonstrations of the various types of mining equipment. Get a sense of what it was and is like to work in a coal mine.

[Around the World with Bethlehem Steel](#)

by Sharon Ann Holt

Bethlehem Steel: Rise and Fall of an Industrial Giant

by Lance E. Metz

Working for the Steel, Creating a Community

by George A. Pinkey

Rebuilding Bethlehem with Bethlehem Steel

by Isidore Mineo

Food for Thought: Industrial Preservation's Legacy

by Edward K. Muller

Featured Web Sites; Featured Books

2. Pennsylvania Canal



Map of historic Pennsylvania canals and connecting railroads

Original Owner	Commonwealth of Pennsylvania
Construction Began	1826
Date Completed	~1840
Date Closed	~1900
Status	Abandoned except for historic and recreational segments and navigable rivers

Adapted from:

http://en.wikipedia.org/wiki/Pennsylvania_Canal

<http://en.wikipedia.org/wiki/Canal>



US canals circa 1825, the Grand Canal, China, and the Thal Canal, [Punjab](#), Pakistan.

WORLD HISTORY THEME The oldest known canals were [irrigation](#) canals, built in [Mesopotamia](#) circa 4000 BC, in what is now modern Iraq. The [Indus Valley Civilization](#), in [Pakistan](#) and [North India](#), (circa 2600 BC) had sophisticated irrigation and storage systems developed, including the [Grand Canal](#) built at [Girnar](#) in 3000 BC. In [Egypt](#), canals date back at least to the time of [Pepi I Meryre](#) (reigned 2332–2283 BC), who ordered a canal [cataract](#) on the Nile near [Aswan](#). In [ancient China](#), large canals for river transport were established as far back as the [Warring States](#) (481–221 BC), one of that period being the Hong Gou (Canal of the Wild Geese), which according to the ancient [historian Sima Qian](#) connected the old states of [Chen](#), [Cai](#), [Cao](#), and [Wei](#). By far the longest canal was the [Grand Canal of China](#), still the longest canal in the world today. It is 1,794 kilometers long and was built to carry the [Emperor Yang Guang](#) between [Beijing](#) and [Hangzhou](#). The project began in 605 and was completed in 609, although it combined older canals, the oldest section of the canal existing since at least 486 BC. Even in its narrowest urban sections it is rarely less than 30 meters wide. [Greek engineers](#) were the first to use [canal locks](#), by which they regulated the water flow in the [Ancient Suez Canal](#) as early as the 3rd century BC.

Canals in the Middle Ages

In the [Middle Ages](#), water transport was cheaper and faster than transport overland. This was because roads were unpaved and in poor condition, and large amounts of goods could be transported by ship. The first artificial canal in [Christian Europe](#) was the [Fossa Carolina](#) built at the end of the 8th century under the supervision of [Charlemagne](#). More lasting and of more economic impact were canals like the [Naviglio Grande](#) built between 1127 and 1257, and the [lombard "navigli"](#). Later, canals were built in the [Netherlands](#) and [Flanders](#) to drain the [polders](#) and assist the transportation of goods.

Canal building was revived in this age because of commercial expansion from the 12th century AD. River navigations were improved progressively by the use of single, or [flash locks](#). Taking boats through these used large amounts of water leading to conflicts with [watermill](#) owners and to correct this, the [lock first](#) appeared, in 10th century AD in China and in Europe in 1373 in [Vreeswijk](#), Netherlands.^[9] Another important development was the [lock](#) which was probably introduced in Italy by Bertola da Novate in the sixteenth century. This allowed wider gates and also removed the height restrictions of [locks](#).

To break out of the limitations caused by river valleys, the first [summit level canals](#) were developed with the [Grand Canal of China](#) in 581 BC. In Europe the first, also using single locks, was the [Stecknitz Canal](#) in Germany in 1398. The first to use pound locks was the [Briare Canal](#) connecting the [Seine](#) (1642), followed by the more ambitious [Canal du Midi](#) (1683) connecting the [Atlantic](#) to the [Mediterranean](#). This included a staircase of locks, a 157 metres (515 ft) tunnel and three major [aqueducts](#).

Canal building progressed steadily in Germany in the 17th and 18th centuries with three great rivers, the [Elbe](#), [Oder](#) and [Weser](#) being linked together. In Roman Britain, the first canal built appears to have been the [Exeter Canal](#), which opened in 1563. The oldest canal built for industrial purposes in Europe is [Mother Brook](#) in [Dedham, MA](#). It was constructed in 1639 to provide water power for mills. In [Russia](#), the [Volga-Baltic Waterway](#), a national project connecting the [Baltic](#) and [Caspian seas](#) via the [Neva](#) and [Volga](#) rivers, was opened in 1718.

Competition from the railway network from the 1830s, and in the 20th century the roads, made the smaller canals obsolete for most commercial purposes and many of the British canals fell into decay. Only the [Manchester Ship Canal](#) and the [Aire and Calder Canal](#) bucked this trend. Yet in other parts of the world they grew in size as construction techniques improved. During the 19th century in the US, the length of canals grew from 100 miles (161 km) to over 1,000 miles, a complex network making the [Great Lakes](#) navigable, in conjunction with [Canada](#), although some canals were later drained and used as railroad right-of-way.

In the United States, navigable canals reached into isolated areas and brought them in touch with the world beyond. By 1825 the [Erie Canal](#), 363 miles long with 82 locks, opened up a connection from the populated Northeast to the [Great Lakes](#). Settlers flooded into regions serviced by such canals and a market was available. The Erie Canal (as well as other canals) was instrumental in lowering the differences in commodity prices between the East and West across America. The canals caused price convergence between different regions because of their reduction in transportation costs, which allowed

ship and buy goods from farther distances for much lower prices compared to before. Ohio built many miles of canal, Indiana had working canals for decades, and the [Illinois and Michigan Canal](#) connected the Great Lakes to the [Mississippi River](#) system until replaced by a channelized river.

Three major canals with very different purposes were built in what is now Canada. The first [Welland Canal](#), which opened in 1829 between [Lake Erie](#), bypassing [Niagara Falls](#) and the [Lachine Canal](#) (1825) which allowed ships to skirt the nearly impassable rapids on the [St. Lawrence River](#) were built for commerce. The [Rideau Canal](#), completed in 1832, connects [Ottawa](#), on the [Ottawa River](#) to [Kingston, Ontario](#) on [Lake Ontario](#). It was built as a result of the [War of 1812](#) to provide military transportation between the British colonies of [Upper Canada](#) and [Lower Canada](#), a part of the St. Lawrence River which was susceptible to blockade by the United States.

In France, a steady linking of all the river systems—[Rhine](#), [Rhône](#), [Saône](#) and [Seine](#)—and the North Sea was boosted in 1879 by the [Freycinet gauge](#) which specified the minimum size of locks so that canal traffic doubled in the first decades of the 20th century.

Many notable sea canals were completed in this period, starting with the [Suez Canal](#) (1869), and the [Kiel Canal](#) (1897), which carries tonnage more than any other canal, though the [Panama Canal](#) was not opened until 1914.

In the 19th century, a number of canals were built in Japan including the [Biwako canal](#) and the [Tone canal](#). These canals were partially built by engineers from the Netherlands and other countries.

The Industrial revolution

Canals were important for industrial development. The greatest stimulus to canal system building came from the [Industrial Revolution](#) with the transport of unprecedented quantities of raw materials and manufactured items.

In Europe, particularly Britain and Ireland, and then in the young United States and the Canadian colonies, inland canals preceded the development of railroads during the earliest phase of the [Industrial Revolution](#). The opening of the [Sankey Canal](#) in 1757, followed by the [Bridgewater Canal](#) in 1761, and the [Liverpool and Manchester Canal](#) in 1789, which lowered the price of coal in [Liverpool](#) and [Manchester](#), respectively, triggered a period of "canal mania" in Britain so that between 1760 and 1820 over 100 miles of canals were built.

The [Blackstone Canal](#) in [Massachusetts](#) and [Rhode Island](#) fulfilled a similar role in the early industrial revolution between 1828–48. The [Blackstone Canal](#) was a major contributor of the American Industrial Revolution where [Samuel Slater](#) built his first mill.

In addition to their transportation purposes, parts of the United States, particularly in the [Northeast](#), had enough fast-flowing rivers that [water power](#) was the primary means of powering factories (usually textile mills) until after the [American Civil War](#). For example, [Lowell, Massachusetts](#), considered "the birthplace of the American Industrial Revolution," has 6 miles (9.7 km) of canals, built from around 1790 to 1850, that provided water power and a means of transport for the city. The output of the system is estimated at 10,000 [horsepower](#).^[10] Other cities with extensive power canal systems include [Lawrence, Massachusetts](#), [Holyoke, Massachusetts](#), [Manchester, New Hampshire](#), and [Augusta, Georgia](#).

Pennsylvania

The canal era began in Pennsylvania in 1797 with the Conewago Canal, which carried riverboats around Conewago Falls on the [Susquehanna River](#) to [Haven](#). Spurred by construction of the [Erie Canal](#) between 1817 and 1825 and the competitive advantage it gave New York State in moving goods to and from the interior of the continent, Pennsylvanians built hundreds of miles of canals during the early decades of the 19th century. These included the [Schuylkill Canal](#) built by Pennsylvania stock companies, the [Schuylkill Canal](#) from Philadelphia to [Port Carbon](#) and the [Union Canal](#) from [Reading](#) to [Middletown](#). The [Main Line of Public Works](#), a system of interlocking canals, railways, and [inclined planes](#), was hauling passengers and freight up to 391 miles from Philadelphia and Pittsburgh. Though not all in concurrent operation, the total length of the canals built in Pennsylvania eventually reached 2,000 miles (2,000 km).

Privately built canals, not technically part of the Pennsylvania Canal, linked to the public system and added to its value. Though most of the canals had any function, some segments retain value as historic and recreational sites. By 1840, work had been completed not only on the Main Line of Public Works but on many other lines, officially called *divisions*. The Main Line consisted of the Eastern Division, the Juniata Division, the Western Division, the [Columbia Railroad](#), and the [Allegheny Portage Railroad](#). North–south divisions operated along the [Delaware River](#) in the east, the Susquehanna River in the middle of the state, and the [Beaver River](#) in the west. A few additions were completed after 1840.

By about 1850, railroads had begun displacing canals as the preferred method of long-distance transportation. In 1852, the [Pennsylvania Railroad](#) offering rail service from Philadelphia to Pittsburgh, and in 1857, it bought the Main Line Canal from the state. In 1859, all canals owned by the state were sold. The PRR formed the Pennsylvania Canal Company in 1867 and continued to use canals to haul freight. However, the canal business

in the last quarter of the century, and most Pennsylvania canals no longer functioned after 1900.

The state funded the following canals in Pennsylvania. For interstate canals, the listed mileage is for the Pennsylvania portion only.

Main Line

- [Eastern Division](#), Columbia to Clarks Ferry, 43 miles (69 km)
- [Juniata Division](#), Juniata Aqueduct to Hollidaysburg, 127 miles (204 km)
- [Western Division](#), Johnstown to Pittsburgh, 104 miles (167 km)
- [Allegheny Outlet](#), Western Division to Allegheny River, 0.75 miles (1.21 km)
- [Kittanning Feeder](#), Kittanning to Western Division, 14 miles (23 km)

Susquehanna

- [Susquehanna Division](#), Clarks Ferry to Northumberland, 41 miles (66 km)
- [West Branch Division](#), Northumberland to Farrandsville, 73 miles (117 km)
- [North Branch Division](#), Northumberland to New York State line, 169 miles (272 km)
- [Wiconisco Canal](#), Clarks Ferry to Millersburg, 12 miles (19 km)

[Lewisburg Cut](#), West Branch Division to Lewisburg, 0.75 miles (1.21 **Canal** refers generally to a complex system of canals, dams, [locks](#),

tow paths, [aqueducts](#), and other infrastructure including, in some cases, railroads in Pennsylvania.

Privately built

Private entities funded the following canals in Pennsylvania. For interstate canals, the listed mileage is for the Pennsylvania portion only.

- [Bald Eagle and Spring Creek Navigation](#) Canal, Bellefonte to Bald Eagle Cut, 22 miles (35 km)
- [Codorus Navigation](#), York to Susquehanna River, 11 miles (18 km)
- [Conestoga Navigation](#), Lancaster to Susquehanna River, 18 miles (29 km)
- [Conewago Canal](#), around Conewago Falls on Susquehanna, 1.25 miles (2.01 km)
- [Delaware and Hudson Canal](#), Honesdale to Roundout, New York, 25 miles (40 km)
- [Lehigh Canal](#), White Haven to Easton, 72 miles (116 km)
- [Junction Canal](#), Athens to Elmira, New York, 3.25 miles (5.23 km)
- [Leiper Canal](#), Crum Creek near Chester, several miles
- [Muncy Cut](#), Muncy to West Branch Susquehanna, 0.75 miles (1.21 km)
- [Pennsylvania and Ohio Canal](#), New Castle to Akron, Ohio, 18 miles (29 km)
- [Pine Grove Feeder](#), Union Canal to Pine Grove, 22 miles (35 km)
- [Sandy and Beaver Canal](#), Glasgow to Bolivar, Ohio, 0.75 miles (1.21 km)
- [Schuylkill Canal](#), Port Carbon to Philadelphia, 108 miles (174 km)
- [Susquehanna and Tidewater Canal](#), Columbia to Havre de Grace, Maryland, 30 miles (48 km)
- [Union Canal](#), Reading to Middletown, 78 miles (126 km)

Several canal segments or other canal infrastructure in Pennsylvania are listed on the [National Register of Historic Places](#). One complete canal, [Canal](#), is the main feature of [Delaware Canal State Park](#) (formerly Theodore Roosevelt State Pk) between Bristol and Easton. It is continuously length of 60 miles. Other Pennsylvania canal infrastructure on the National Register (and [List of canals in the United States](#)) includes the follow

- [Allegheny Portage Railroad](#), from Johnstown to Hollidaysburg, which is both a [National Historic Site](#) and a [National Historic Landmark](#)
- D & H Canal Company office, scenic drive, northwest side of [Lackawaxen Township](#)
- Juniata Division, guard lock and feeder dam, Raystown Branch, [Juniata River](#), 2.5 miles (4.0 km) east of [Huntingdon](#), south of U.S. Rd. 30, Springfield, Pennsylvania; Juniata Division, 1.5 miles (2.4 km) of canal between the Pennsylvania Railroad main line and the Juniata F [Township](#)
- [Leesport Lock House](#), a Lockhouse on the Schuylkill Canal in [Leesport](#)
- Lehigh Canal, Allentown to Hopeville section, Lehigh River near [Bethlehem](#), Lehigh Canal, Carbon County section along Lehigh River vicinity, Lehigh Canal, Glendon and Abbott Street Industrial Sites, Lehigh River from Hopeville to confluence of Lehigh and Delaware

- [Easton](#), Lehigh Canal, Lehigh Gap to South [Walnutport](#) boundary, Lehigh Canal, Walnutport to Allentown section, [Allentown](#) and vic
- Schuylkill Navigation Canal, Oakes Reach section, north and east bank of [Schuylkill River](#) from Pennsylvania Route 113 to Lock 61
- Union Canal Tunnel, west of [Lebanon](#) off Pennsylvania Route 72, West Branch Division, canal and Limestone Run aqueduct, [Milton](#), canal north of Torrance in [Westmoreland County](#), Western Division, canal along the [Conemaugh River](#) near Robinson

References;

1. "[Pennsylvania Canals](#)". Pennsylvania Historical and Museum Commission. <http://www.phmc.state.pa.us/ppet/canals/page1.asp?secid=> 2007-11-08.
2. Shank, William H. (1986). *The Amazing Pennsylvania Canals, 150th Anniversary Edition*. York, Pennsylvania: American Canal and T Center. ISBN 0-933788-37-1.
3. "[Pennsylvania's Transportation System: the Canals](#)". Pennsylvania State Archives. <http://www.doheritage.state.pa.us/documents/cana> 2007-11-08.
4. "[National Register Information System](#)". *National Register of Historic Places*. National Park Service. 2007-01-23. <http://www.nr.nps.g> 2007-11-09.
5. "[Delaware Canal State Park](#)". Pennsylvania Department of Conservation and Natural Resources. <http://www.dcnr.state.pa.us/stateparks/parks/delawarecanal.aspx>. Retrieved 2007-11-09.

External links: [Pennsylvania Canal Society](#); [American Canal Society](#); [National Canal Museum](#)

THE PENNSYLVANIA CANALS.

By James Macfarlane, Ph. D.

Author of the Coal Regions of America, and A Geological Railway Guide.*

The Erie Canal was completed from Buffalo to Albany, in 1825. About this time the attention of the people of Pennsylvania was turned to the importance of improved inland navigation. Railroads were not in existence, and as the only navigable rivers in the state were the Delaware and the Ohio, a system of canals along the valleys of the rivers in the interior of the state, especially from Philadelphia to Pittsburgh, with a portage over the Alleghany Mountains, was thought to be the most feasible plan for improving the means of transportation. The state of Pennsylvania, after extensive preliminary surveys made in 1824 and 1825, entered in the year 1826 into the actual construction of an extended system of internal improvements and continued the annual expenditure of large sums of money for canals and railroads for fifteen years or until 1841. A vast debt was accumulated, upon which the state, for several years, was unable to pay even the interest, and work on all the canals was stopped. Sixteen years afterwards, the main line from Philadelphia to Pittsburgh was sold, and in the following year all the other canals were also disposed of. This ended the career of the state as a builder or owner of canals and railroads. Happily the state debt which was so rashly incurred is now practically all paid, and a proper conclusion of this narrative will be to tell how the government of this, one of the largest states of the Union, is now carried on more cheaply than any other of its size, and, strange to say, without any tax whatever upon real estate. To the older citizens of the state it will be interesting to recall the principal events of this period, and to those who are younger much of it will be new, and to residents of other states part of it may be instructive.

It is difficult for us to conceive the state of this country as to its facilities for transportation in early times. Before a turnpike was constructed across the Alleghany Mountains we are told that it required a good team of five or six horses, from eighteen to twenty-five days to transport from 2,500 to 3,500 pounds of goods from Philadelphia to Pittsburgh.

(*) An unpublished manuscript written in 1875, and read before the Historical Society of Western Pennsylvania, on February 23, 1915 by the author's son, the Hon. James R. Macfarlane.

J. Deindustrialization in Brownsville, Pennsylvania



WORLD HISTORY THEME

Deindustrialization (also spelled deindustrialisation) is a process of social and economic change to a country's political economy in which there is the removal or reduction of industrial capacity or activity in a country or region, whereby durable goods production for domestic and export consumption, that is integrated both vertically and horizontally into the creation of finished goods that meet the full spectrum of demand, are systematically reduced across the full spectrum of finished goods by category; as well as from raw materials to final assembled products. It is an opposite of industrialization.-- <http://en.wikipedia.org/wiki/Deindustrialization>
Deindustrialization struck towns in Western Pennsylvania like Uniontown and Brownsville particularly hard. For a history For history of de-industrialization in Pennsylvania, see <http://www.press.umich.edu/pdf/0472109782-07.pdf>

Brownsville

Brownsville played an important role in the settlement of America's first frontier and in the industrial development of western Pennsylvania. The site where Brownsville now stands, home to Native Americans, was known as 'Redstone Old Fort'. A road connecting Maryland to the lands west of the Appalachian Mountains followed Nemaquin Trail (blazed by the Indian Chief Nemaquin); was the first road paid for by the Government; and was known as the 'National road' or 'National Pike'. The road was later improved and used for pioneer and military use by the British. Brownsville situated, at the western most point of Fayette County, on the National Road and overlooking the Monongahela River was the gateway to the west. Thomas Brown, realizing that pioneers would be drawn to the Brownsville area to get to the Ohio Valley and the state of Kentucky, purchased land in the 1700's and by mid 1700's a town was being mapped out. It was then, that the town of Brownsville (named for Thomas Brown and formerly known as Redstone Old Fort) became a "keel-boat" building center as well as other businesses for travelers. The businessmen from Brownsville supplied transportation and supplies to the traveling pioneers, and the town became very prosperous. The steamboat industry soon took over to facilitate traffic along the Monongahela River. The very first steamboat, the Enterprise, to travel to New Orleans and return by its own power was designed and built in the Brownsville boatyards and launched from the Brownsville Wharf in 1814.

The town began to decline in the mid 1800's due to the completion of a railroad designed to connect Philadelphia to Pittsburgh. Brownsville's transportation system wasn't able to surpass the fast track of the railway.

The steel industry soon appeared and shortly after that in the twentieth century, Brownsville's rich coal veins provided the necessary product for making steel and became an important railroad and commercial center. This boom lasted until the mid 1900's when many changes in industry affected the atmosphere of this twice prosperous town and many other communities in this Monongahela Valley. -<http://www.brownsvilleboro.com/>.

That decline is traced in a WQED documentary <http://www.wqed.org/tv/onq/specials/brownsville.php> and <http://www.wqed.com/ondemand/onq.php?id=80> which can be a template for this similar locations in the region.

Student Activity:

<http://www.wqed.org/tv/onq/specials/brownsville.php> and <http://www.wqed.com/ondemand/onq.php?id=801>

K. The Second World War as a Window into the Marginalized



WORLD HISTORY THEME

Warfare often opens windows into the marginalized of the world, for example, Nisei Japanese Americans, and the Tuskegee Airmen, a unit that a tie to Pittsburgh:

Tuskegee Army Air Corps

The *Pittsburgh Courier* championed the Tuskegee Airmen experiment as part of its “Double V” campaign. Initiated by the federal government in 1939, the Civilian Pilot Training Act prepared citizen aviators in case of a national emergency. Six historically Black colleges participated in the program, including Tuskegee Institute, which graduated its first class of pilots in 1942. Known as the Tuskegee Army Air Corps, these men served between 1941 and 1945. Over 1,000 trained for the war effort. The Tuskegee Airmen included pilots, navigators, bombardiers, mechanics, support staff, and instructors.

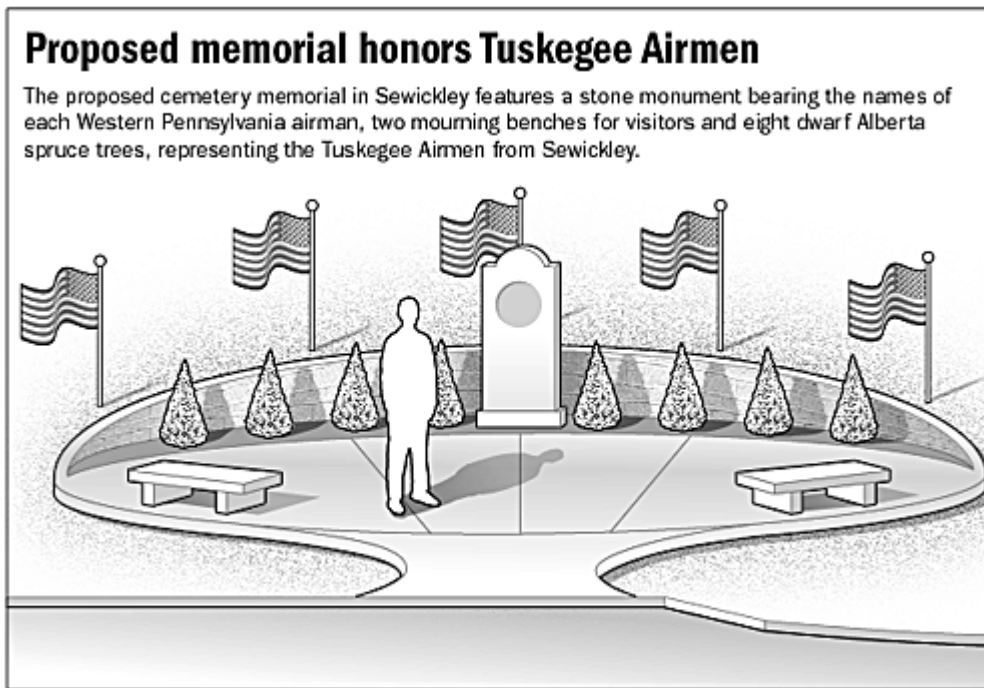
Over 80 men from Western Pennsylvania served as Tuskegee Airmen, eight from Sewickley alone.

There will soon be memorial in Sewickley recall Tuskegee airmen.

See “Local group wants black flyers to be remembered Sunday, July 04, 2010” by Torsten Ove, Pittsburgh Post-Gazette:

The Tuskegee airmen, legendary black aviators of World War II who fought the Germans in the skies and battled their own segregated military at home, are in their 80s and dwindling fast.

In a few years, they'll all be gone. But a local group has plans to make sure these famed flyboys are never forgotten. The Western Pennsylvania Tuskegee chapter, which will receive its formal charter this month at the airmen's national convention in San Antonio, intends to build a regional memorial in Sewickley Cemetery, joining three others in Michigan, California and Alabama.



Source: From a rendering by Bob Coyner

PostGazette

Read more: <http://www.post-gazette.com/pg/10185/1070384-455.stm#ixzz1HY5fROYz>
<http://www.post-gazette.com/pg/10185/1070384-455.stm>

See also:

Regis Bobonis calls his involvement in the creation of a new Greater **Pittsburgh** Chapter of **Tuskegee Airmen** "the most fulfilling experience" of his career. Bobonis, 83 ...

www.pittsburghlive.com/x/pittsburghtrib/news/pittsburgh/s_647023.html

Action News Extra: **Pittsburgh**-Area **Tuskegee Airmen** Leave Behind Legacy POSTED: 3:18 pm EST February 6, 2008
UPDATED: 6:28 pm EST February 6, 2008 **PITTSBURGH** -- The **Tuskegee** ...tuskegeeairmen.org/uploads/Legacy.pdf · PDF file

The surviving pilots -- the first black military aviators in the U.S. -- will return to
www.pittsburghlive.com/x/pittsburghtrib/news/cityregion/s_546107.html?source=rss&feed=1

Where they live. A neighborhood breakdown of **Pittsburgh**-area **Tuskegee airmen**: Sewickley: 7. Homewood: 13. Hill District: 11. Beltzhoover: 6. North Side: 3

www.post-gazette.com/pg/10185/1070384-455.stm

[WQED: Fly Boys: Western Pennsylvania's Tuskegee Airmen](http://www.wqed.org/inghome/branding/Tuskegee.html)
www.wqed.org/inghome/branding/Tuskegee.html · Cached page

The **Tuskegee Airmen** served the country with valor at a time when many thought they couldn't or shouldn't. The group helped change conventional wisdom ...

www.wtae.com/news/15235929/detail.html

Global conflicts also illustrate the role of women in world history, often in unexpected ways.

Using the marker of the life of Helen Richey, students can explore the themes of the NEH Edsitement lesson plan devoted to the contributions of the Women Airforce Service Pilots (WASPs) during World War II. Using these resources, students can examine portrayals of women in World War II posters (and newsreels) and compare and contrast them with personal recollections of the WASPs. Students will gain an understanding of the importance of the WASP program, which enhanced careers for women in aviation.

Helen Richey

Region: Pittsburgh Region

County Location: Allegheny

Marker Location: Renzie Park, Corner of Eden Park Boulevard and Tulip Drive, McKeesport

Adapted from:

<http://www.yorkblog.com/yorktownsquare/2010/11/world-war-ii-pilot.html><http://explorepahistory.com/hmarker.php?markerId=960> (Do not miss video interview with another flyer)

<http://explorepahistory.com/storydetails.php?storyId=31&chapter=1> (searchable by county)

<http://www.docstoc.com/docs/2317823/THE-STORY-OF-HELEN-RICHEY>

<http://edsitement.neh.gov/lesson-plan/women-aviators-world-war-ii-fly-girls>

<http://wwii-women-pilots.org/classlists/docs/HRichey43-5-Weigand.pdf>

<http://explorepahistory.com/storydetails.php?storyId=31&chapter=1>

Site Visit

In 1934, Richey, of McKeesport, became the 1st woman to pilot a commercial airliner. Discriminated against because she was a woman, she resigned within a year and went on to become the 1st woman licensed instructor by the Civil Aeronautics Authority: and in WWII, the commandant of the American wing, British Air Transport Auxiliary; member of the women's Airforce Service Pilots; and Major by war's end.



Behind the Marker



On December 31, 1934, Helen Richey became the first woman to pilot a commercial...

Credit: Image donated by Corbis-Bettmann

Famed aviatrix Helen Richey exemplifies the involvement of American women in World War II, with all the successes and failures attendant to their participation. When war broke out in Europe in 1939, Richey was already an experienced pilot and holder of several world records. Indeed, in the 1930s she had been one of the nation's most famous female pilots, a young woman with Hollywood looks who set world records for women, and raced with Amelia Earhart. In 1935 Richey had become the first woman to pilot a commercial airline, but was quickly forced out of the cockpit by systematic harassment of male pilots, who considered the new field of commercial aviation their own domain. Job shortages during the Great Depression had discouraged women from working outside the home; however, times were changing. First Lady Eleanor Roosevelt and Secretary of Labor Frances Perkins showed that women could be accepted as decision makers by a male-dominated world.



During World War II, 21,887 women from the Commonwealth served in the armed...

Credit: Courtesy of Temple University, Urban Archives, Philadelphia, Pa.

As American industries geared up for war production, employment became more plentiful. This, coupled with the 1940 draft, slowly but surely led to manpower shortages in several areas of the country. Women began to leave their homes and enter the work world into jobs previously held only by men. Female pilots like Richey longed to serve their country, but the American military was not yet ready for women in uniform. In 1940, Richey broke another barrier, becoming the first woman licensed by the Civil Aeronautics Authority as an aviation instructor. That same year, Jacqueline Cochran, another hotshot female pilot who held world records against men as well as women, repeatedly suggested to General Henry H. "Hap" Arnold, commander of the Army Air Corps, that women pilots could help the expanding air corps. Reluctant to use women, Arnold advised Cochran to gather other female pilots and go to England, where the Royal Air Force was already using women as shuttle pilots in its the Air Transport Auxiliary to fly new aircraft from the factories to air bases. "Hap" Arnold thought that Jackie Cochran and her fellow pilots might gain some experience there while helping our ally fight the Nazis.



At the height of World War II, women accounted for one of every four war workers....
Credit: Courtesy of Temple University, Urban Archives, Philadelphia, Pa.

In 1942, Helen Richey was one of the first American women to go to England. When she came home after more than a year's service, Richey joined the new Women's Air force Service Pilots (WASP), a group of female pilots selected to ferry newly built military aircraft from factories to air bases. WASP pilots were originally restricted to flying smaller aircraft, but gradually, as demand for ferrying grew, they piloted big bombers, such as the B-17. Some groups of WASP pilots also flew aircraft that towed targets for antiaircraft practice, sometimes a dangerous assignment. By the time the WASP corps was disbanded in late 1944, more than 1,000 women pilots had performed valuable services for the United States.

Women also entered the other branches of the United States military, serving in the Women's Army Corps (WAC), the Navy (WAVES-Women Accepted for Volunteer Emergency Service), the Marine Corps Women's Reserves, and the Coast Guard (SPARS). The United States prohibited women in the military from entering combat, but thousands also served as military nurses, some of whom were killed while attending to their duties near the front lines.

The greatest contribution by women during World War II was at home in the work force. Millions of American men entered the Armed Forces after American entry into the war in December 1941. Faced with critical labor shortages, the War Manpower Commission directed that defense industries "fully utilize ... the largest and potentially the finest single source of labor available today—the vast reserve of women power." Women generally received lesser pay than male workers, many of whom resented their presence on the job.



As a member of the Women's Airforce Service Pilots (WASP) during World War II,...

Credit: Courtesy Aviation Museum of Kentucky, George Gumbert

Represented by the ubiquitous Rosie the Riveter, working women learned skills and trades previously denied them, freed up men to fight, and kept factories producing at full speed. Pennsylvania, with its heavy concentration of defense industries, became a major employer of women. Here, they worked in factories assembling guns, bomb fuses, airplane wings, and other war materiel. They drove trucks and heavy equipment, manned the railroads, and welded steel in shipyards.

Close to 6.5 million women went to work during World War II; by 1944, they represented about 36 percent of the entire civilian force. After the end of the war, employers quickly laid them off to make room for the returning veterans. Most accepted the loss of their new jobs and economic independence, but others found the loss of opportunities difficult. Depressed by her inability to find employment as a pilot, Helen Richey committed suicide in 1947. For other women, though, the war provided the impetus to increase their struggle for equal rights. In 1943, Max Lerner, a well-known New York journalist, recognized the changes that were taking place. "[W]hen the classic work on the history of women is written," he penned, "the biggest force for change in their lives will turn out to have been war. Curiously, war produces more dislocations in the lives of women who stay at home than of men who go off to fight."

Beyond the Marker

Diane B. Reed, "Wanted: Women to Meet the Wartime Challenge! A Pictorial Essay," *Pennsylvania Heritage* (21:2, Spring 1995): 12-19.

Glenn Kerfoot, *Propeller Annie: The Story of Helen Richey, the Real First Lady of the Airlines* (Lexington, KY: Kentucky Aviation History Roundtable, 1988).

Marianne Verges, *On Silver Wings: The Women Air Force Service Pilots of World War II* (New York: Ballantine Books, 1991).

L. Migration, Emigration, Diaspora and Ethnic Histories

WORLD HISTORY THEME

According to Pat Manning, migration is a central force in world history. Among the themes of world history it addresses are the spread of the earliest hominids, the controversy surrounding the rise of homo sapiens, the diffusion of major language groups, the formation and course of civilizations, farmers and pastoralists from 3000 BCE to 500 CE, trade patterns in the Indian Ocean, along the early Silk Road, and maritime trade in the Mediterranean and, as will be seen below, especially in the case of Pittsburgh, the effect of migration on empire and industry between 1700 and 1900, and its resurgent role in twentieth century in movement to cities, refugees and diasporas.

1. Interactive map “Where Americans Are Moving”: Where are Pennsylvanians Moving.”

More than 10 million Americans moved from one county to another during 2008. The map below visualizes those moves. Click on any county to see comings and goings: black lines indicate net inward movement, red lines net outward movement.

Students may be directed to discuss their own families’ movements into and away from Pittsburgh and why and how those movements came to pass via this [US Migration Map By County](http://www.forbes.com/2010/06/04/migration-moving-wealthy-interactive-counties-map.html), available since June 14, 2010 at Forbes.com

Line weight is used to show the number of people. From Map: Where Americans Are Moving, article by Jon Bruner for Forbes Magazine:

<http://www.forbes.com/2010/06/04/migration-moving-wealthy-interactive-counties-map.html>

Sample User Guidelines:

What county do you live in?

What country/county did your family come from to that place?

When and under what circumstances in global terms did they come there (The Enclosure Movements in Europe, the Industrial Revolution, the Great Depression, religious/political/ethnic persecution? You may also note non-global factors, but concentrate on global factors. Non-global factors include marriage and family disputes. Students moving temporarily due to school should only refer to place of more permanent residence—not to school address).

With what global cultural landmarks does your family have associations and why? These include churches, lodges, ethnic community activities such as Chinese or Vietnamese Tet holidays, restaurants, ethnic markets, a nationalities room at the University of Pittsburgh’s Cathedral of Learning etc.

Where might you come to live outside your present county/country? Why?

2. Immigration, Diaspora, and Ethnic Histories

In 1930, one out of every six Pittsburgh residents was an immigrant. Drawn by chain migration (families following other family members) and the prospect of work in coal mines, steel mills, railroads, and other local industries, Irish, Italian (more came from Italy than from any other country in the world) and other immigrants in contributed greatly to the growth and development of western Pennsylvania and endowed the region with a rich and vibrant ethnic culture that has endured to the present day, a contribution visible in community life, leisure, religion, and family life.

Key Resource: Pennsylvania Historical Society

Left hand margin index for teachers and students at <http://www.hsp.org/default.aspx?id=682>

Key Books:

1. Nicolas Ciotola, *The Italians of Pittsburgh* (Arcadia, 2005) See <http://www.amazon.com/Italians-Pittsburgh-Western-Pennsylvania-America/dp/0738537780>
2. Lisa Alzo, *Slovak Pittsburgh* (Arcadia, 2006) See http://www.amazon.com/Slovak-Pittsburgh-PA-Images-America/dp/0738549088/ref=pd_sim_b_2.
3. Mary Brignoano, *Boundless Lives: Italian Americans in Western Pennsylvania* (Historical Society of Western Pennsylvania, 2002).
4. Non-Site Driven Activity/Lesson Plans/Resources from the Pennsylvania Historical Society, Left hand margin index for teachers and students at <http://www.hsp.org/default.aspx?id=682>. For site possibilities, see:

► **Settlement**

German

Irish

► **Italian**

Introduction

Lesson Overview

State Standards

Activities Overview

Primary Sources

Glossary

► **Resources**

Chinese

Arab

Latino

African

South Asian

Korean

Community

Work/Industrialization

Interethnic Relations

Credits

3. The Scots and Irish in Pittsburgh

Key Resources: Non-Site Driven Activity/Lesson Plans/Resources are offered by the from the Pennsylvania Historical Society, Left hand margin index for teachers and students at <http://www.hsp.org/default.aspx?id=682>. Alos useful are

The Carnegie Library Resource Guide to the Irish Organizations in Pittsburgh: A collection of links to *Irish* ethnic organizations in the *Pittsburgh*, Pennsylvania area and in the United States at:

<http://www.carnegielibrary.org/research/socialstudies/ethnic/irish.html>,

<http://www.clpgh.org/research/socialstudies/ethnic/irish.html>, <http://www.pittsburghirish.org/irishcentre/index.htm>,

http://pittsburgh.about.com/library/weekly/aa_scotch_irish.htm, [Pittsburgh Genealogy - Resources for Research in the Steel City](#).

Introduction (http://pittsburgh.about.com/library/weekly/aa_scotch_irish.htm)

Pittsburgh and Western Pennsylvania claim a strong Irish heritage, dating back to the 18th century. The region's first settlers hailed from Scotland and Ireland, most putting down roots in the area as farmers and tradesmen. These Scotch-Irish were primarily young, rebellious Presbyterians who played a large part in the [Whiskey Rebellion](#) of 1794. The [University of Pittsburgh](#), [Washington & Jefferson College](#), [Allegheny College](#) in Meadville, [Westminster College](#), [Grove City College](#) and [Geneva College](#) were all founded by Scotch-Irish. Noted Scotch-Irish in Pittsburgh history include [Stephen C. Foster](#), [Robert Fulton](#) and [Andrew W. Mellon](#).

In the early 1800's, Irish Catholics began to cross the Alleghenies and settle in Pittsburgh. In 1808, these immigrants built [St. Patrick's](#) Catholic Church in the Strip District and settled the bustling downtown business district. The [Great Irish Potato Famine](#) brought even more Irish immigrants, more than doubling the population of Allegheny County over a ten year period. Most of these men and women, did not come as a result of the famine, however. They were primarily from prosperous areas of Ireland, such as Ulster, and brought their skills to the area as teamsters and shopkeepers. The [Sister's of Mercy](#), also among this group of immigrants, made many important contributions to Pittsburgh's heritage including [St. Paul's Cathedral](#), [Carlow College](#) and [Mercy Hospital](#). Irish from other parts of the U.S. also ended up in Pittsburgh while working on the [Ohio & Pennsylvania Railroad](#) and the [Ohio Canal](#). Many left the railroad gang while in Pittsburgh to find better paying jobs as dockhands or in the coal fields. During 1890, more Irish immigrants poured into Western Pennsylvania, settling primarily at the Point in downtown Pittsburgh. An entire community of Irish sprung up around the old [Fort Pitt Blockhouse](#), calling themselves "Little Ireland." Other Irish communities grew in the South Side, Strip District, North Side, Oakland and Lawrenceville. Most of these settlements were crowded and very impoverished, leading Pittsburgh politicians to encourage a distrust of these Irish immigrants. Many factories even hung "Irish Need Not Apply" signs on their doors. Eventually, fraternal groups such as the [Ancient Order of Hibernians](#) helped to bring about change in people's attitudes to the Irish settlers and civic leaders rallied against low wages and poor working conditions. 1940 brought [David Lawrence](#), the first in a long string of Pittsburgh Irish mayors and later the governor of Pennsylvania. Pittsburgh's Irish heritage was finally something of which the city was proud.

4. Italians in Pittsburgh

Key Resources: <http://www.heinzhistorycenter.org/secondary.aspx?id=80&contentID=35>

Heinz History Center, Exhibits and State Marker history celebrating notable Italians in Pennsylvania
Carnegie Library: <http://www.clpgh.org/research/socialstudies/ethnic/>;
<http://www.clpgh.org/research/socialstudies/ethnic/general.html>
<http://www.clpgh.org/research/socialstudies/ethnic/indian.html>

Bibliography: <http://www.clpgh.org/research/socialstudies/ethnic/immigration.html>

Site Visit: http://www.pittsburghlive.com/x/pittsburghtrib/ae/s_635216.html This Frank Vittor bust of Guglielmo Marconi is in the lobby of the KDKA, Downtown. The likeness of the inventor of the wireless telegraph includes clouds and lightning bolts around his shoulders.



5. India in Pittsburgh



See article "Indian-American community grows in Western Pennsylvania," by **Craig Smith** in the Pittsburgh Tribune- Review Sunday, February 28, 2010 Read more: [Indian-American community grows in Western Pennsylvania - Pittsburgh Tribune-Review](http://www.pittsburghlive.com/x/pittsburghtrib/news/s_669327.html#ixzz1GBKc0yLw)
http://www.pittsburghlive.com/x/pittsburghtrib/news/s_669327.html#ixzz1GBKc0yLw

As one of three Indian-American students in the Penn Hills School District during the 1980s, Srideva Rao James faced the clash of traditions her immigrant parents tried to keep alive, and modern American culture. "My mother made our house a little India inside. Outside was America, but when you walked back in, it was India. It was hard," said James, 39, of McDonald.

The family didn't celebrate American holidays. Her parents didn't allow James to hold sleepovers or play sports. "I wish I would have gone to the prom. My parents didn't know that was a big deal," she said. "I always thought

I was missing something." James and her husband, Mark, 42, are making up for what she missed. "I put up three Christmas trees," said James, who is working to become a nurse.

Today, Indian-Americans such as James are part of a growing community that's building upon the groundwork laid by ancestors lured here by jobs and dreams of prosperity. About 14,000 live in the Pittsburgh metropolitan area and more than 57,000 live in Pennsylvania, according to Census Bureau figures.

"There is a very significant and constantly growing Indian population here," said Tom Buell Jr., spokesman for GlobalPittsburgh, a group that promotes the region internationally. They are predominantly white-collar professionals, doctors or workers in the high-tech sector. The State Department said India was second to Mexico in 2008 for sending immigrants to the United States. A 2008 survey by Rebtel, an Internet phone service, ranked Pittsburgh eighth among U.S. cities in placing calls to India.

Immigration from India to Pittsburgh began in the late 1950s and came in several waves, including one tied to fears of a Y2K computer glitch in 2000, said Kollengode Venkataraman, editor and publisher of the Pittsburgh Pratrika, a newspaper and Web site aimed at Indian-Americans. "A lot of Indians came to fix the computers," he said.

The average Indian community in the United States has an annual growth rate of 10.5 percent, said the United States India Political Action Committee, or USINPAC, a lobbying group aimed at strengthening U.S.-India relations. The opportunities that exist here allowed them to pursue careers that would be frowned upon in India, said Yeshvant Navalgund, 38, of North Huntingdon, who helped start a USINPAC chapter here.

"My own mother and father were so much more open to trying other things ... other than everybody had to be a doctor or an engineer," he said.

Indian-Americans have made substantial contributions to the region's medical and technical fields, as well as its culture, said University of Pittsburgh professor Fred Clothey, author of "Ritualizing on the Boundaries." They are "the most affluent immigrant group in the U.S. ... They contribute to the arts, and sponsor cultural events," Clothey said.

With 2.7 million Indian-Americans living in the United States, they are the fastest growing ethnic segment of the population, he said. Indians in Pittsburgh have become an integral part of the community, said Navalgund, whose father, Ashok Navalgund, fell in love with the city when he was recruited in 1982 to work with transplant pioneer Dr. Thomas Starzl.

Instead of isolating themselves into specific neighborhoods as other immigrant groups did, they blended into the community, Navalgund said. "Typically, people coming to the U.S. move to a large city ... form Chinatowns or Indiatowns," Navalgund said. "They've done a nice job of being Pittsburghers."

Many people who came here to attend schools assimilated into the community instead of returning home, said D. Raja, co-founder of Computer Enterprises Inc., or CEI. Raja is a Mt. Lebanon commissioner and chairman of the Republican Committee of Mt. Lebanon. "The groups are so integrated here," he said.

In addition to the lure of jobs, Indians may have been attracted to Pittsburgh because it reminded them of home, author Francis C. Assisi wrote in "The Hinduization of America." Devotees point to the similarity of Pittsburgh's three rivers and the sacred place in India where the rivers Ganga, Yamuna and the underground Saraswati meet. "It's almost a holy place," Navalgund said of Pittsburgh's three rivers.

One of the main temples in India -- the Sri Venkateswara Temple, the equivalent of the Vatican -- is located atop the Tirupati hill. In Pittsburgh, Indian immigrants saw hills and the three rivers, Naval Gund said. They replicated the Sri Venkateswara Temple in Penn Hills, and built the Hindu Jain Temple in Monroeville, places where families gather on weekends so children can learn classical Indian dance, music and religion. A temple "is a world on the boundaries, no longer purely Indian, but not yet part of the American majority. It is a world that is both Indian and American, but not fully either one alone," Clothey wrote in "Ritualizing on the Boundaries."

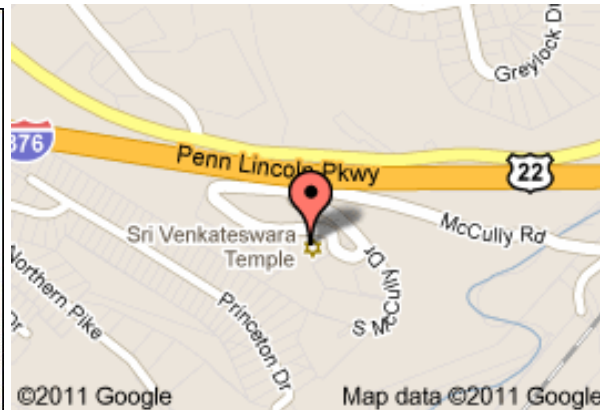
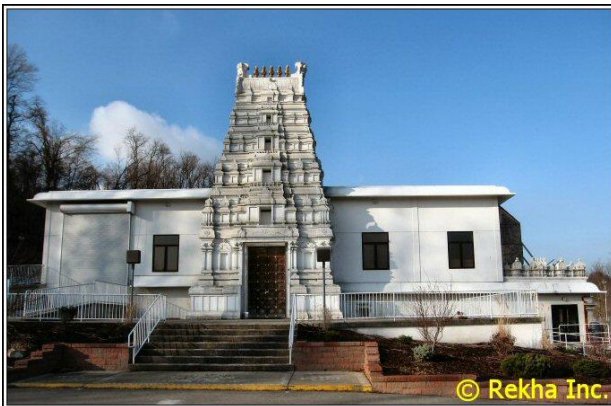
With established lifestyles in the United States, Indian-Americans have entered the political arena on the local, state and national level. In addition to Raja, Manan Trivedi, an Iraq War veteran, is running for Pennsylvania's 6th Congressional District seat, held by Republican James Gerlach since 1990. Piyush "Bobby" Jindal is governor of Louisiana. "We have the ability to make change in the U.S.," said Naval Gund. The political action committee he is affiliated with nationally supported 25 candidates for state and federal office over the past eight years. Raja, 44, who was born in Bangalore, an area known as the "Silicon Valley of India," said his experience in politics has been interesting. "Some days are good; some days build character," he said.

Indian Organizations in the Pittsburgh Region:

[Ankur: Indian Graduate Student Association \(IGSA\)](#)

[Bengali Association of Pittsburgh](#) [Indian Cultural Association of Pittsburgh \(ICAP\)](#)

Indian Temples in Pittsburgh



[Sri Venkateswara Temple](#)

1230 South McCully Dr

Penn Hills, PA 15235

Ph: 412-373-3380

[Click here for more pictures of Balaji Temple](#)

Sri Venkateswara Temple is the anchor of the Indian community in the greater Pittsburgh area. Located in the eastern suburb of Penn Hills, Sri Venkateswara Temple is one of the earliest Hindu temples to be built in the U.S. The main deity in the temple is Venkateswara, a representation of Lord Vishnu. The temple is modeled after the world famous Venkateswara temple in [Tirupati](#) in South India. Deities at the [Sri Venkateswara](#) temple include Lord Balaji, Lord Ganesh, Lord Shiv & Goddess Parvathi. Facilities in the temple include an auditorium & canteen. Temple organizes Balavihar & senior Balavihar classes.

The temple is located at 1230, South McCully Dr, Penn Hills, PA 15235



<http://www.hindujaintemple.org/>

The Hindu Jain Temple provides a place for Hindus and Jains to worship while providing religious, humanitarian, cultural and educational resources to our members. In addition, the Hindu Jain Temple promotes ideals for world peace, harmony, spiritual and personal health

My Visit to the Hindu Temple of Atlanta

Sri Venkateswara, or Balaji in northern India, is an avatar of Vishnu (Sri Venkateswara Swami). He is the presiding deity of the Tirumala Hills, in Anhra Pradesh India, and of the Hindu Temple of Atlanta. He revealed himself and settled at Tirumala in response to the indifference to the prayers and rigorous penance of Sage Narayan. The sage requested for Lord Vishnu to shower his eternal grace on the people, who were unable to follow their rigorous yoga practices to realize god (Rangaswamy).

Since seven hills surrounds Tirumala, Sri Venkateswara is sometimes referred to as the Lord of the Seven Hills (Rangaswamy). Today an average of 30,000 devotees daily visit the sacred shrine of Lord Venkateswara to pay homage (Introduction).

Though the Hindu Temple of Atlanta probably is not as popular, devotees do travel from different states to go there. The Hindu temple's design greatly resembles that of the Sri Venkateswara temple in Tirumalai (Mohan). There are four Vimanas (shrines) inside the temple; the main one for Venkateswara, one each for his two wives Maha Lakshmi and Andal, and one for Durga. There is also a separate shrine for Ganesha inside the main hall, an altar for Navagrahas (the nine planets), and a separate outside shrine for Anjaneya. Besides the bigger shrines, there are also statues of deities from various Indian temples along the side walls (Mohan). On the right wall there are Varaha Swamy, Satyanarayan Swamy, Venkateswara Swamy, Narasimha Swamy, Kodanda Rama, Krishna, Dakshinamurthi, and Chandrasekhara. On the left wall there are Sharada, Maha Lakshmi, Manonmani, Meenakshi, Kanchi Kamashi, Mahishasura Mardha, Subramanya, and Vinayaka.

The idol of Sri Venkateswara is black and has four hands. He is standing in a golden arched doorway with flowers hanging around him. He wears a golden crown, armlets, earrings, and a veil. All the things that are found in his manifestation are symbolized by ornaments on his idol and are symbolic (Sri Venkateswara Swami).

Sri Venkateswara's crown denotes supreme sovereignty and represents the unknowable reality. His three golden armlets are symbolic of the three aims of worldly life: righteousness, success, and pleasure. His two earrings are in the shape of sea creatures or makara, and they represent the two methods of knowledge: intellectual or sankhya and intuitive perception or yoga. His gold veil robe or pitambara represents the Vedas by showing that, "the dark body shines through the thin golden veil just as divine reality shines through the sacred utterances of the Vedas" (Sri Venkateswara Swami).

Sri Venkateswara's lower right hand is in Varada Hasta or boon giving position (Sri Venkateswara Swami). By his lower right hand being directed toward the ground, he tells his devotees to surrender to him and he will help them in all their difficulties (Rangaswamy). His lower left hand is in Katyavalambita position or turned inwards grasping the inner thigh (Sri Venkateswara Swami). This tells his devotees that "the ocean of births and deaths is only knee deep and he would take care of those who totally surrender to him with intense faith and redeem their sins" (Rangaswamy).

Lord Venkateswara holds in his upper left hand the Pancha-Janya, Sankou, or conch shell. The conch is the symbol of the origin of life. When blown, it produces the sound 'aum' from which creation sprung. It has the form of a multiple spiral, evolving from one point into ever increasing spheres. It is associated with the element of water, the

first compact element. The name of the conch Pancha-janya (born-of-five) also suggests the five elements or pancha bhuta (Sri Venkateswara Swami).

In his upper left hand, Sri Venkateswara holds a Sudarsana Chakra or discus. It stands for the universal mind, the limitless power that invents and destroys all the spheres and forms of the universe over and over again like a wheel (Sri Venkateswara Swami). It shows his total annihilating power to destroy evil and raise a devotee to a higher spiritual plane, and that he is the controller of time (HTA pamphlet).

The fact that he has four arms represents fulfillment of manifestations in all spheres of existence, the four stages that are found in every form of development of life. In the image it also represents dominion over four directions of space and thus absolute power (Sri Venkateswara Swami).

The first of the rituals performed for Sri Venkateswara is called abhishekams or the sacred shower of God. The idol is adorned with only a modest white cloth. The priests bathe him with five items found in God's creation: milk and curd, which symbolize nourishment, honey mixed with fruit, symbolizing sweetness, turmeric powder for its healing powers, and sandal wood powder for its fragrance (HTA pamphlet).

Then the priest comes around and with a flower and sprinkles holy water on the worshippers. Next, another priest brings around a platter with flame and sandal wood powder. The priest then closes the doors of the shrine to privately dress and decorate their god.

After Sri Venkateswara is in his glory, the priests open the doors and the worshippers line up to see him. The first puja performed is the breaking of the coconut. The coconut is the purest form of offering and also has great symbolism. The three eyes

represent the trinity of evolution: creation, preservation, and dissolution. The different layers stand for the three elements of human existence: the outer shell is the physical condition, the inner white is psychological elements, and the milk represents our spiritual composition (HTA pamphlet).

Next, the priest brings the a platter of fire and the devotees put their right palm over it and then touch their forehead. The following priest then asks your name so they can ask blessing from Sri Venkateswara in your favor. Then they bring around what resembles a platter with a dome shaped cover. The devotees bow and the cover is placed over their heads. Then they bring out aarthi (holy water) and prasad (fruit) that has been offered to their god as Naivedyam. They give it back to the devotees so they can eat it and have the blessings of their god (HTA pamphlet). All the while the priest and devotees are singing out the 1,000 names of God.

The Hindu Temple of Atlanta is a huge ivory building with extreme meaning for the Hindu followers of Atlanta and lower eastern states. My first impression was one of wonder and dread. This was going to be a new experience for me and I didn't want to offend followers by doing something wrong. After I followed a couple of young women in, I noticed that there were shoes piled by the door. I took the hint. I then asked someone for the manager so he could show me around. I followed him up to just outside the main assembly hall was the abhishekam was being performed. He told me that I could go inside and watch.

My second trip was a lot easier. I meet a man named Mohan who told me the meanings of some of the rituals and stories of his gods. He also took me to the

kitchen, where I had my first taste of Indian food. Going to the Hindu Temple was like taking a small trip to India, and I would recommend it to anyone.

Brigette Abercrombie

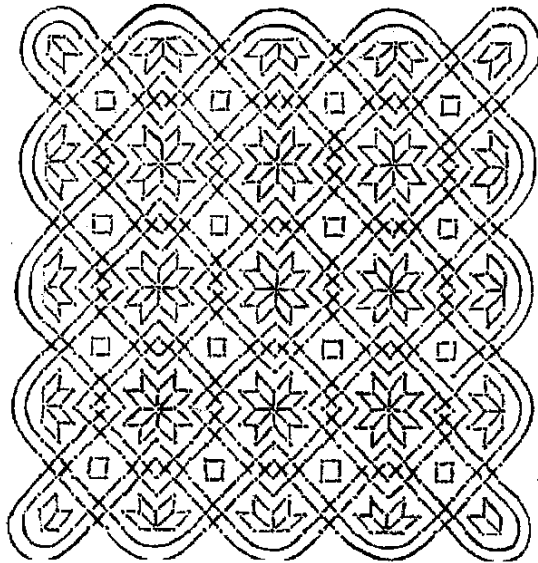
HIST 1112 – M/W/F (11:00)

Fall Semester 2001

December 7, 2001

Kolam

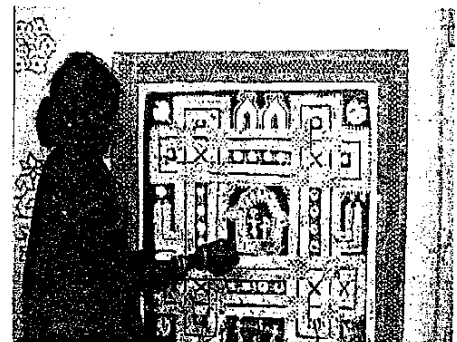
Stepping outside the houses of Tamil Nadu in Southern India at daybreak, one would see women on their doorsteps sprinkling water on the ground or sweeping their doorsteps. They are



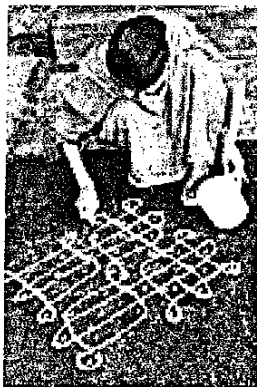
preparing to draw the most important type of female expression in India, the kolam. These designs have many different names and are known as Kolam in the south, Rangoli in the north, Chowpurana in northern India, Madana in Rajasthan, Aripana in Bihar, and Alpana in Bengal is the ancient Hindu religious floor art (Hindu Universe 1). Kolam can be seen most commonly in Tamil Nadu, Andara Pradesh, and

Karnataka, and is a strong surviving element of Hindu culture.

Kolam is drawn on the floor in front of houses, in courtyards, on walls of houses, in places of worship, in eating-places, or in front of deities in pooja rooms (Kamat's 1). Each kolam consists of a certain number of white dots with one uninterrupted line curling around the points. No gaps are allowed to occur because this could allow evil spirits to enter into the home (Kolam 1). They can be a very simple design of three dots by three dots or an elaborate 21 dots by



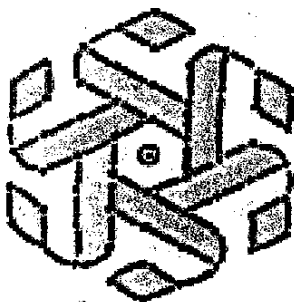
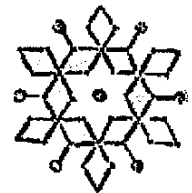
allowing the kolam to stand out more (Kalyanansundaram 1). Next, the dry and coarsely ground rice flour is rubbed between the thumb and forefinger, and then moved along the predetermined pattern by the artist (Kolam 1). The dots are placed on the ground first and then she begins work on the curly, uninterrupted line. If the women choose not to use their bare fingers they may use a brush to create the designs instead (Kamat's 1). Rice



flour powder was used traditionally as a type of nourishment for small animals, like ants and birds (Kolam 1). This practice supported the Hindu belief that one must take care of other forms of life (1). Now, women substitute quartz powder, white stone powder, lime and other cheap paste,



because kolams have lost much of their religious meaning and the alternative substances are much easier to work with (Chandler). Presently, a new step is being added, which is derived from Rangoli (A Mirror 2). Rangoli is made up of various color planes, and the Hindu women of southern India have begin filling in the sections of their kolams with color powders to add additional charm to them (2). Red brick powder is another popular addition used to outline the kolam, making it more grand



and attractive (Kolam 1). Sometimes, women will choose to use petals to allow various patterns and colors to be produced from such flowers as, oleanders, cosmos, zenias, chrysanthemums, and green leaves (Kamat's 1). The kolam is then complete, but how long it will stay is not known because the traffic in and out of the house quickly fades

these beautiful pieces of artwork.

The art of kolam has many different purposes that it serves. These decorations are symbols to invite the goddess Mahalakshmy to the home everyday, welcoming gestures to visitors, and they serve as symbols of good fortune (A Mirror 2). The kolams also have a religious meaning to Hindu. These “painted prayers” are place outside the doorstep to welcome the goddess of prosperity, and are even considered a form of visual prayer to honor the goddess Lakshmi (Fox 10). Lakshmi is believed to bring wealth and good fortune, so the people pray for her



to enter the house and stay (10). Hindus also believe that the Gods prefer cleanliness and beauty, and kolam offers both of these to their deities (Karnat’s 2). One reason the kolams were traditionally made of rice flour to feed insects and small animals was because the people believed that the insects would feed on the flour and bless their house (Chandler). Therefore, the kolams are used for their beauty to embellish the doorstep and as prayers to bring good fortune (Chandler). Today, however, most kolams are created for decorative purposes and have lost much of their religious meaning.

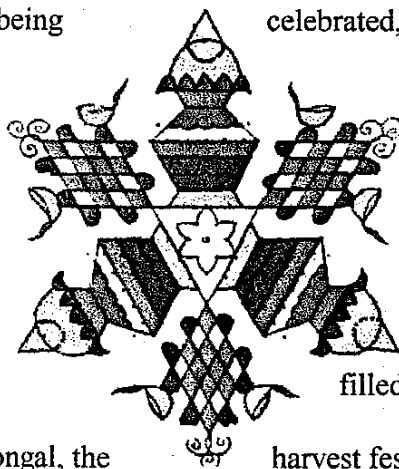
Girls are taught this art form from their early childhood on, no matter what cast or religion they are (A Mirror 2). Mothers, grandmothers, and aunties all contribute to the girl’s ability in learning the art of kolam, and teach the girl that lots of time and practice is required to master the



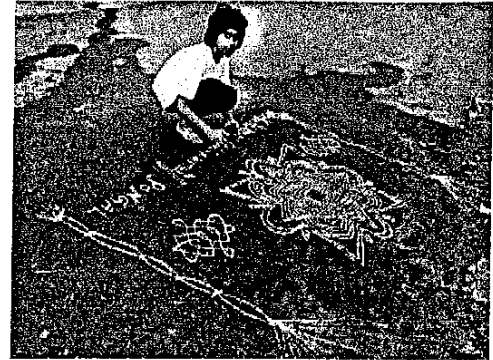


art (2). The ability of the girl to draw beautiful kolams is still one of the criteria of how potential brides are chosen in some of the rural areas since most marriages in India are still arranged (2). This fact helps the art of kolam survive and it has continued to be passed down from generation to generation by females of all stature, so girls, like the one in this picture are taught at a young age and practice continuously for perfection. High rise apartments and fast paced city life are making the practice some what non-existent in the cities, but this artwork is still being practiced religiously in many towns and villages (Chennai 1). Popular magazines in India publish new designs every week to give women new ideas, and, on special occasions, they hold Kolam contests (Kamat's 2). Girls and wives compete, regardless of competitions, every time they draw a new design.

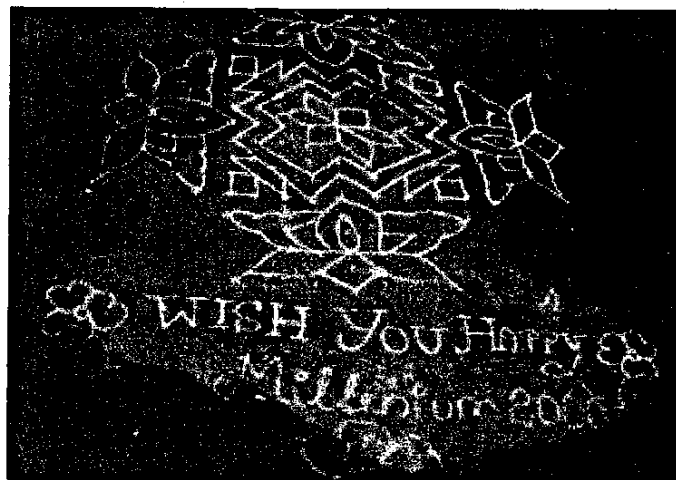
Different festivals are cause for even more elaborate and different types of kolam. According upon the festival being celebrated, certain items - - like lamps, shivalingas, temple cars, or pumpkin flowers - - are included in the designs (A Mirror 3). The Tamil month of Marghazi Maasam (mid-December to mid-January) calls for larger kolams with yellow pumpkin flowers, and entire streets are actually filled with kolams using the flowers as centerpieces (Chennai 1). Pongal, the harvest festival on the first four days of the Tamil month of Thai (mid-January), is another festival with exceptional kolams (1). During these four days, they celebrate and express their grattitude to the Gods, the cattle, and the earth (1). Houses are cleaned and decorated, people wear new clothes, and the cattle are decorated



with beads, bells, and flowers (1). For the Pongal festival, a lump of cow dung is placed in the middle of the kolam, which holds a five-petalled pumpkin flower (2). In this picture the girl is preparing a kolam for the Pongal festival and has left any area in the middle to place the cow-dung (Kamat's 3). This



particular design is a symbol of fertility and an offering of love to the deity (2). On the second day of the Surya Pongal, the area where the puja is to occur, usually in the courtyard or in an open terrace, is washed and smeared over with cow-dung and allowed to dry (2). The entire area is then covered in kolams, which are designed especially for the occasion. In India, each holiday and festival causes more elaborate kolams to be drawn, and entire streets are often covered in the artwork (Travel India 1). Below is an example of a kolam designed for the millennium to ask for prosperity in the New Year (Kamat's 1).



The Atlanta International Museum of Art and Design is holding an exhibit entitled "Treasure From the Smithsonian: A First Look" that includes a section about the art of kolam in Tamil, Nadu (Fox 10). The museum hopes to use this exhibit to bring a distant and ancient

culture closer to Georgia, and to help educate people about others beliefs. There are actually 800 Tamil Nadu families in Metro Atlanta that this exhibit also reaches out to (Fox 10). The exhibit is in the Arthur M. Sackler Gallery, and opened October 11, 2001 and will be held until August 23, 2002 (Atlanta 1). The museum has recently been named an affiliate of the Smithsonian Institution, which allows it to display Smithsonian artwork (1). The Atlanta International Museum of Art and Design joins the Smithsonian Institution, which includes only 65 other museums, as the only one in Georgia (1). Because they are the first affiliate in Georgia, the institution hopes to use this museum to present the greatest collection of art and artifacts to the entire region. The exhibit includes sculptures that the people of the Tamil village offer to please the Gods and ask for their protection. The two terra cotta pieces by Palaniappan, a horse and a bull, are the most prized presentations of the exhibit (Atlanta 1). They are both fired earthenware that was wheel-thrown and modeled in South India around 1985. The horse the museum has on display is seen here, and was retrieved for the Atlanta International Museums web page. Their importance can easily be seen because the two pieces are each displayed in the



center of a room on a high pedestal with a very detailed description.

This is a picture of the actual horse the museum has on display and was retrieved for the Atlanta International Museum's web page (Atlanta 1). There are also sculptures of the Goddess Veeran, Ayyanar with his cowsorts, and the Seven Mothers. cottages, and other. The most interesting part of the exhibit, however, seems to be the kolam. There is a special room for this part of the exhibit, and an actual example drawn on a piece of clay floor, brought in by the museum. Trees and plants were also added to help make the

exhibition appear more realistic. Pictures of different designs, women working on kolam, and a step-by-step illustration on how to draw a kolam are also on display. Detailed explanations of the artwork and its history are typed out, and have been hung on the wall to help explain the kolams relationship to the other sculptures. The museum explains that like the sculptures, these kolams are also offerings to the Gods asking for protection and prosperity. The exhibit is very intriguing and helps people not of Indian origin understand why Hindu are so unique, while educating them at the same time. The museum is open Monday thru Friday from 11:00 in the afternoon until 5:00 in the evening, and admission is only three dollars for nonmembers or people over age twelve. The museum itself is located on the garden and lobby levels of the Marquis II Office Tower at the Peachtree Center in Atlanta. For a detailed map and directions see the museums web page at www.atlantainternationalmuseum.org. Viewing this show is highly recommended and guaranteed to be interesting.



Kolam is a fascinating type of art that takes years of practice to learn and even longer dedication to continue drawing the art daily. Even though the art has lost a good portion of the original religious quality, its ties to the Indian culture remain strong. Through studying kolam one can easily see how essential an element this art is to Tamil culture, and hopefully this ancient practice will continue to be passed on from generation to generation by Indian women. Learning how some cultures have been able to hold on to such ancient ways, almost makes one wish American culture could offer such an equivalent.

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Content Review Questions:

- 1) There are several different purposes that kolams perform. Name a-
- 2) Where are some of the places Hindu women draw kolams?
- 3) How does this ancient practice survive over the years?
- 4) Describe the actual process of drawing a kolam.

Content Review Answers:

- 1) Kolams are drawn to invite certain gods or goddesses into the home. They also attract visitors, symbol good fortune, ask for prosperity and wealth from the gods, and protect against small animals.
- 2) Women draw kolams on doorsteps, in courtyards, on house walls, in dining-eating-places, in pooja rooms, and in streets.
- 3) Kolam is allowed to survive because the mothers, grandmothers, and granddaughters pass it through each generation. This art is also still a huge part of festivals and the Hindu culture.
- 4) To draw a kolam, the first step is to clean the area and sprinkle water. Then a certain number of dots are drawn with rice powder or another substance. An uninterrupted line is curled around the dots. The women can then draw various designs according to the area she lives in and the time of year.

Global Connections Questions:

- 1) How is the art of kolam being brought closer to Georgia and why?

6. The Nationality Rooms at the University of Pittsburgh's Cathedral of Learning

Location: First and Third Floors, along the perimeter of 157 Cathedral Of Learning, Pittsburgh (412) 624-6000.
[Directions](#).

Lesson Plan at <http://www.docstoc.com/docs/5920355/Nationality-Rooms-Lesson-Planpdf>


The **Nationality Rooms** are a collection of 27 classrooms in the [University of Pittsburgh's Cathedral of Learning](#) depicting and donated by the ethnic groups that helped build the city of Pittsburgh. The rooms are designated as a [Pittsburgh History and Landmarks Foundation](#) historical landmark and are located on the 1st and 3rd floors of the Cathedral of Learning, itself a national historic landmark, on the University of Pittsburgh's main campus in the [Oakland](#) neighborhood of Pittsburgh, Pennsylvania, United States. Although of museum caliber, twenty-five of the 27 rooms are in almost constant use as functional classrooms and utilized daily by University of Pittsburgh faculty and students, while the other two are display rooms which can be explored only via guided tour. The Nationality Rooms also serve in a vigorous program of intercultural involvement and exchange in which the original organizing committees for the individual rooms remain as participants and includes a program of annual student scholarship to facilitate study abroad. In addition, the Nationality Rooms inspire lectures, seminars, concerts exhibitions and social events which focus on the various heritages and traditions of the nations represented. The various national, traditional and religious holidays of the nations represented are celebrated on campus and the rooms are appropriately decorated to reflect these occasion--
http://en.wikipedia.org/wiki/Nationality_Rooms

The Nationality Room Program was founded by Ruth Crawford Mitchell at the request of Pitt [Chancellor John Bowman](#) in 1926 in order to involve the community as much as he could in constructing the [Cathedral of Learning](#) and to provide the spiritual and symbolic foundation of the Cathedral that what would make the inside of the building as inspiring and impressive as the outside. Under Mitchell's direction, invitations were extended to the nationality communities that made up the Pittsburgh area to provide a room that was representative of their heritage. Each group had to form a Room Committee, which would be responsible for all fundraising, designing, and acquisition. The University provided the room and upkeep in perpetuity once completed, while all other materials, labor, and design were provided by the individual committees. These were sometimes partly provided for by foreign governments which, "...responded with generous support, often providing architects, artists, materials, and monetary gifts to assure authenticity and superb quality in their classrooms." Each room's detail is carefully designed and executed down to the switch plates, door handles, hinges and wastebaskets. The work is often performed and designed by native artists and craftsmen and involves imported artifacts and materials. Mitchell remained Director of the Nationality Rooms program until 1956, having overseen the creation of the first 19 rooms on the first floor of the Cathedral. A successor to Mitchell wasn't named until 1965, when current Director E. Maxine Bruhns took over the program, overseeing the completion (so far) of eight additional rooms on the third floor.

A typical room on the 1st floor (those built between 1938 and 1957) took between three and ten years to complete, and cost the equivalent of \$300,000 USD in 2006 dollars, which was no small undertaking during the fundraising and construction of the initial rooms during the [Great Depression](#) and [World War II](#). More recent rooms have cost in the range of \$500,000 USD and up. Upon completion of their rooms, the committees turn to a program of intercultural exchange and fundraising for nationality rooms scholarships which enable University of Pittsburgh students and faculty to study abroad. The room committees also sponsor cultural and fund raising events, lectures, concerts, exhibits, social events, workshops on ethnic studies that may utilize the rooms. The committee may use its room for non-political meetings, lectures, or other functions if no classes are scheduled.

Distinguished international visitors are received by the committees, and special projects are undertaken including the purchase of books for the [University libraries](#), publication of volumes on topics from comparative literature to ethnic recipes, and the fostering of courses in the mother languages. National, traditional, and religious holidays are celebrated on campus and committees decorate their rooms or mount displays to commemorate special occasions.



 The English Classroom, the largest of the 27 Nationality Rooms, contains several artifacts from the original [House of Commons](#)

The first four rooms to be dedicated were the [Scottish](#), [Russian](#), [German](#), and [Swedish](#) Rooms in 1938.” The newest rooms are the [Indian](#) Room dedicated in 2000 and the [Welsh](#) Room dedicated in 2008.

Original plans also proposed, in addition to the Nationality Rooms on the first floor, the creation of "[Pennsylvania](#)" classrooms on the second floor to be dedicated to the pioneering groups within the state along with third floor "Pittsburgh" classrooms dedicated to showcasing the history of the [Western Pennsylvania](#) or different eras of American history. Although the plans for the series of rooms were drawn up, only one room in was installed, the Early American Classroom, and is now counted among the other Nationality Rooms. The plans for the other Pittsburgh and Pennsylvania rooms were never executed, and the Nationality Room program grew to occupy all of the first and much of the third floor.

Upon completion of a room, a dedication ceremony is held in which a formal presentation of a ceremonial key is presented to the University's Chancellor in order to symbolize the bestowal and acceptance of the gift with a commitment on behalf of the University to maintain the room in perpetuity. The particular nationality room committee's officers then become active members of the Nationality Council which focuses on providing summer study abroad scholarships for Pitt students along with other non-political cultural or educational events within the Nationality Program's scope. Today the Cathedral is home to 27 Nationality Rooms (twenty-five working classrooms and two display rooms), on the first and third floors. Each nationality room is designed to celebrate a different culture that had an influence on Pittsburgh's growth, depicting an era prior to 1787, the University's founding and the signing of the [United States Constitution](#). Only one room does not follow this convention, with the French Classroom depicting the French Empire period of the early 19th century. There are currently nine additional rooms in the process of being approved and funded.

Set in the Cathedral of Learning's cornerstone in 1937 is a gift from the Nationality Room Committee chairpersons to the University: a copper plate engraved with these thoughts:

Faith and peace are in their hearts. Good will has brought them together. Like the [Magi](#) of ancestral traditions and the shepherds of candid simplicity, they offer their gifts of what is precious, genuine and their own, to truth that shines forever and enlightens all people.

Since 1944, tours of the nationality rooms have been given to visitors by a Pitt student organization, [Quo Vadis](#) (meaning *Where do you go?*); they guide over 40,000 tourists a year. With reservations, specially themed tours based on creature symbolism, images of royalty, and folktales are also given. An estimated 100,000 visitors, including self-guided and walk-in tourists, visit the Nationality Rooms each year.

Principles



The Indian Classroom, opened in 2000, is one of the newer Nationality Rooms that continue to be installed on the third floor

The following principles, in order to assure commonality of purpose, authenticity, and non-political cultural emphasis, governed the creation of nationality rooms from the programs inception in 1926 until the completion of the Irish Classroom in 1957.


- A Nationality Room must illustrate one of the outstanding architectural or design traditions of a nation that is recognized as such by the [United States Department of State](#).
- The design of a given historical period must be cultural and aesthetic, not political. The period depicted should be prior to 1787, the date of the United States Constitution, with emphasis on cultural roots.
- To avoid political implications in the room, no political symbol is permitted in the decorations, nor a portrait or likeness of any living person.
- The only place a political symbol may be used is in the corridor stone above the room's entrance.
- No donor recognition may appear in the rooms. Donor recognition to the rooms is recorded in a Donor Book.
- Most architects and designers of the rooms have been born and educated abroad. This has been instrumental in ensuring authenticity of design.

In the 1970s, policy revisions were implemented which retaining most of the earlier principles, utilized a broader definition of nation to include a body of people associated with a particular territory and possessing a distinctive cultural and social way of life. This allowed the creation of the Armenian and Ukrainian rooms prior to their establishment as independent nations following the collapse of the [Soviet Union](#), as well as allowing for the installation of the African Heritage Room.

The room must also be a functional teaching classroom with enough student tablet-armed seats, professor's lectern or table, adequate sight lines and lighting, modern audiovisual technology, and other necessities of a classroom. New rooms also have narrated tour equipment. Materials are to remain authentic and durable that are executed through architectural form and not mere surface embellishment and are to provide eternal qualities that have the potential to "teach" about the cultures with appropriate non-political symbols and artifacts.

African Heritage

The African Heritage Classroom


<i>African Heritage Classroom</i>	
	
Room	330
Dedicated	December 17, 1989
Concept	Dr. Laurence Glasco
Architect	William J. Bates, A.I.A.
Style	18th century Asante Temple

The [African](#) Heritage Classroom was designed to reflect an 18th-century [Asante](#) temple courtyard in [Ghana](#) which would provide the setting for ceremonial events, learning, and worship. The classroom represents the entire continent of Africa with [Yoruba](#)-style door carvings by Nigerian sculptor Lamidi O. Fakeye depicting ancient kingdoms of Africa including [Egypt](#), [Nubia](#), [Ethiopia](#), [Benin](#), [Kongo/Angola](#), [Kuba](#), [Mali](#), and [Zimbabwe](#). Plaster forms in the [frieze](#) represent the arts, music, science, languages, literature of Africa. A [display case](#) housing artifacts from various African nations and the chalkboard area reflect [patos](#) around the courtyard. Below the chalkboard doors depicting the [Igbo](#) lozenge and star motif are [Sankofa](#) birds which

symbolize the need to learn from the past in order to prepare for the future. The oxblood steps, two levels of student benches, and [wainscot](#) with relief decorations suggest the polished clay of a Asante temple. Openwork screens are present on the windows as they are used in Asante structures to filter the sun's rays while allowing air flow. Six chieftain stools provide informal seating near a hand-carved professor's lectern.

Armenian



 The Armenian Classroom

Armenian Classroom



Room 319

Dedicated August 28, 1988

Architect Torkom Khrimian

Style 10th-12th century Monastic

The [Armenian Classroom](#)^[9] was inspired by the 10th- to 12th-century [monastery of Sanahin](#). The design consists of intersecting arches and a domed ceiling built to lessen damage from frequent earthquakes in that

country. The room's arches, built of Indiana limestone, make this the heaviest of the Nationality Rooms, weighing 22 tons, and required the second floor beneath the room to be reinforced in order to support its weight. The cornerstone is a [basalt](#) stone from the grounds of Sanahin. In the mortar behind it are the thumbprints of five of the oldest Armenian [diaspora](#) living in the Pittsburgh area, as well as the handprint of an infant of Armenian descent, symbolizing the continuity of the Armenian presence in western Pennsylvania.

Austrian



The Austrian Classroom

Austrian Classroom



Room 314

Dedicated June 9, 1996

Architect Franz Gerhardt Schnögass, Vienna

Gunther J. Kaier, A.I.A. Pittsburgh

Style 17th-18th century Baroque

The [Austrian](#) Nationality Room represents the 18th century area of the Austrian Empire during its age of enlightenment under Empress [Maria Theresa](#) and her son [Joseph II](#) and incorporates [Baroque](#) elements of the [Haydn Saal](#) in [Schloss Esterházy](#) at [Eisenstadt](#) where [Joseph Haydn](#) served as [Kapellmeister](#) from 1766 to 1778. Ceiling paintings depict scenes from Roman mythology similar to those in the Haydn Saal. The room features Lobjoy crystal chandeliers, gilded white lacquer seminar furniture patterned after that in the formal dining hall of [Vienna's Hofburg](#), royal red-tapestried walls, gold-leafed [pilasters](#), and a parquet floor inlaid in a starburst design. Exhibits in the display cases in the room trace the development of the multinational [Austrian Empire](#) and the birthplaces of representative Austrian composers born within its borders between years 1000 and 1918.

Chinese



The Chinese Classroom

Chinese Classroom



Room 136

Dedicated October 6, 1939

Design	Teng Kwei, Beijing
Architect	Henry Killiam Murphy
Style	18th century Chinese Empire

The [Chinese Classroom](#) is inspired by the design of a palace hall in [Beijing's Forbidden City](#) and is dedicated to the memory of [Confucius](#) and his democratic ideal of classless education. The teacher and students sit at the same level around a moon-shaped teakwood table. The professor's chair is carved with the admonition to "Teach by inspiring gradually and steadily". A slate portrait of Confucius is present that is patterned after one in the [Confucian temple](#) at his birthplace of [Qufu](#) in [Shandong Province](#). Above the red lacquered door, Chinese characters are carved into the stone lintel that proclaim that "Humility of mind goes with loftiness of character." Stone lions flank the entrance before carvings of the plum blossom, the national flower of China. The ceiling contains a coiling golden five-clawed imperial dragon surrounded by clouds denoting nature's energy and freedom. Painted squares portray dragons guarding the pearl of wisdom and the [phoenix](#) with the motan flower, a symbol of cultural wealth. The opened blackboard doors reveal painted renditions of the babao, or [Eight Treasures](#), used popular in [Chinese art](#). On the base below is a carved version of the [Bagua](#) which consists of eight trigrams surrounding the circular [Yin and Yang](#). Windows consist of frosted glass with stylized [comes](#).

Czechoslovak



 The Czechoslovak Classroom

Czechoslovak Classroom



Room 113

Dedicated March 7, 1939

Architect Dr. Bohumil Sláma, Prague

Style Folk Motif

The [Czechoslovak](#) Classroom combines elements of a [Slovak](#) farmhouse, country church, and the [Charles University in Prague](#) while detailing men who contributed to Czechoslovak culture. The motto of the classroom, and of the former [Czechoslovak government in exile](#), is proclaimed by the inscription of "Pravda Vítězí" which translates to "Truth Will Prevail" and surrounds a bronze relief portrait of the first President and founder of Czechoslovakia [Tomáš Garrigue Masaryk](#). In a wrought-iron case near the window bay, a letter penned by the hand of Masaryk to students at the University of Pittsburgh recalls [John Amos Comenius](#)' belief that "education is the workshop of humanity". All woodwork, except the furniture, is made of [larch](#) wood which grows to great heights in the [Carpathian Mountains](#). The ceiling, with flat boards overlapping each other between heavy beams, is painted by [Prague](#) artists Karel and Marie Svolinsky and depicts botanically accurate flowers and plants of Czechoslovak and reflects a typical Slovak farmer's home and the style of country churches. A "tree of life" design on the rear wall surrounds the text of the proclamation by King of [Bohemia](#) and Emperor of the [Holy Roman Empire Charles IV](#) that marked the founding of the University of Prague in 1348. The plaster reveals of the bay window area is decorated by murals of miraculous trees bearing flowers and fruits and harboring animals, birds, and insects reflecting "peasant writings" and executed by the artists in freehand. Ceiling panels portray eight famous persons in [Czech](#) and Slovak history from the 9th through 19th centuries including [Cyril and Methodius](#) who created the [Cyrillic alphabet](#), [Waclaw](#) who was the "[Good King Wenceslaus](#)" of the [Christmas Carol](#), [Jan Hus](#) who was a champion of [Czech](#) religious freedom, [John Amos Comenius](#) who often considered the father of modern education, [Jan Kollar](#) a Slovak poet who called for [Slavic](#) unity, [Ludovít Štúr](#) who developed the Slovak literary language, and Bishop Stefan Moyzes who pioneered popular education in [Slovakia](#). [Intarsia](#) done by V. Kopka of [Moravia](#) are found on the entrance door panels and the professor's desk and lectern which depicts university academic disciplines. Embroidery, lace, Bohemian crystal, and historical documents are displayed in the wall cabinet.^[10]

Early American



 The Early American Classroom

<i>Early American Room</i>	
Room	328
Presented	1938
Architect	Theodore H. Bowman, A.I.A. Pittsburgh
Style	17th century New England Colonial


The [Early American](#) Room is one of two display rooms not used as a functional classroom, however it is opened for guided tours. The room was commissioned by longtime University Pittsburgh trustee [George Hubbard Clapp](#), a descendant nine generations removed from Roger Clapp, an English captain who sailed into the [New England](#) port of [Hull](#) on May 30, 1630. The kitchen-living room of the early colonists was chosen to portray the sturdy simplicity of life in American during the 1650s. The room's focus is a nine-foot fireplace constructed from 200-year-old handmade bricks with "fixings" of a log hook, heavy iron kettles, a spider, gridiron, longhandled waffle iron, bread shovel, skewers, ladles, and forks. A small recess in the brick wall served to bake bread. A tapered pole swings out from the end of the fireplace to be used for drying laundry or to hang a quilt to keep the cold draft from those gathered near the fire. Massive handhewn pine beams used in the seven-foot-high ceiling and the fireplace were collected after a careful search in [Massachusetts](#). [White pine](#) is used for the heavy seminar table, benches, and chairs. [Wrought-iron candelabra](#) are hinged with clasps to hold lighting tapers. Other light fixtures are of specially designed pierced tin. The colonial-style windows were designed by glass artist [Charles Connick](#). Decorative items include a collection of 17th- and 18th-century American coins, a working spinning wheel, and a hand-stitched sampler. The small closet between the blackboard and fireplace contains a secret panel and once the concealed latch is discovered, its release causes the wall to swing open, revealing a hidden staircase to the upper loft, which has been furnished as a 19th-century bedroom. Included in the bedroom is a four-poster rope bed and small cradle, both of which belonged to pianist and composer [Ethelbert Nevin](#). The bedroom also includes several personal items, including an 1878 wedding quilt, which

belonged to Waitman Worthington McDaniel and his wife Martha Jane Poe, a distant relative of [Edgar Allan Poe](#) and the grandmother of Nationality Director Maxine Bruhns. The room is associated with various stories of unexplained incidents that have resulted in claims that the room is haunted.

English



 The English Classroom

<i>English Classroom</i>	
	
Room	144
Dedicated	November 21, 1952
Architect	Albert A. Kimcheck
Style	16th century Tudor-Gothic

The [English Classroom](#) is designed in the [Tudor-Gothic](#) style after the [House of Commons](#) that was rebuilt by [Sir Charles Barry](#) following the fire of 1834 and which was subsequently destroyed by [Luftwaffe](#) bombing on May 10, 1941. The English Classroom is the largest of the Nationality Rooms and incorporates several original relics given as gifts by the [British Government](#) rescued from the House of Commons following the bombing, including the stone fireplace, [hearth](#) tiles, [linenfold oak](#) paneling, entrance doorframe, [lintel](#), and [corbels](#). The

fireplace is from the Commons' "Aye Lobby", so named because voters walked through it to vote "yes", and is marked with the initials V.R. for [Victoria Regina](#). The [cast-iron fireback](#) and andirons commemorate the defeat of the [Spanish Armada](#) in 1588 and an inscription above the fireplace is from [Shakespeare's King Richard II](#) and uses lettering adapted from the letter tiles original designed for medieval paving by the Monks of [Chertsey Abbey](#) in [Surrey](#). The inscription reads: "Set in the silver sea.....this blessed plot, this earth, this realm, this England." Above the doorway hangs a royal [coat of arms](#) made in 1688 during the reign of [King James II](#). The linenfold paneling itself arrived at the University still having a blackened coat from the bombing.^[17] Under the ceiling trusses are four carved [limestone](#) corbels from the House of Commons that are carved with a [Tudor rose](#). Two corbels remain uncarved to emphasize the original carved corbels. The window frames, set in limestone, are characteristic of the Tudor period, and contain old imported glass, seeded and tinted, and encased in small, diamond-shaped leaded carnes. [Stained-glass](#) window medallions depict the coats of arms of English towns and cities, literary and political figures, scholars of the Universities of [Cambridge](#) and [Oxford](#), and the Houses of [Lords](#) and Commons. Portraits of University of Pittsburgh alumnus and former Ambassador to the [Court of St. James's](#), [Andrew Mellon](#), and the former [Earl of Chatham](#), [William Pitt](#), after whom the City was named, flank the stained glass windows in the rear bay. A brick from [10 Downing Street](#) serves as the room's [cornerstone](#). The [white oak](#) floor is fitted together with wooden peg [dowels](#). Tudor-Gothic oak benches resemble the old House of Commons benches and are similarly arranged. Two English oak tables with melon-shaped legs stand before the bay. Two House of Commons Library chairs upholstered in green leather and bearing the official gold crest featuring the [portcullis](#) and crown were a gift of [Lord Alfred Bossom](#) and were rebuilt using wood from actual chairs in the bombed House of Commons.

French



The French Classroom

French Classroom



Room 149

Dedicated January 23, 1943

Architect [Jacques Carlu](#), Paris

Style Late 18th century French Empire

The [French Classroom](#) was designed by [Jacques Carlu](#), Director of [School of Architecture](#) in [Fontainebleau](#), in the [French Empire Period](#) that reflects a French style inspired by the glories of the ancient and classical past that were rediscovered during the [Napoleonic](#) campaigns in [Greece](#), [Italy](#), and [Egypt](#). This places the timeframe of inspiration for the classroom in the late 18th century and early 19th century, just after the founding of the University of Pittsburgh in 1787, therefore making it the only classroom which represents an era postdating the founding of the University, although many room elements are influenced by the [Palace of Versailles](#) which clearly predates it. The color scheme of the room is blue-gray, royal blue, and gold, which were suggested by French-American architect [Paul Philippe Cret](#) and are typical colors used at the height of the French Empire. The walls of the room are lined with wood paneling in classical proportions, and slender wall [pilasters](#) are capped with delicately carved and gilded crowns. Carved ornaments of the Egyptian [griffin](#) and classical rosettes accentuate panel divisions. A wall cabinet containing art objects, books, and medallions balances the entrance door and maintains the room's symmetry. Crystal and metal chandeliers, which are simplified versions of those found in Palace of Versailles' [Hall of Mirrors](#), hang from a grey plaster ceiling. A parquet floor pattern also reflects many rooms in the Palace of Versailles. A [mahogany](#) professor's chair and table are of the [Directoire period](#) design include bronze ornaments imported from France that are replicas of originals on Empire furniture in the [Louvre](#). The mahogany student tablet armchairs are upholstered in royal blue. On the rear wall, a 16th century Choufleur [tapestry](#) depicts an allegorical woodland scene including, among other animals, a [unicorn](#) which often served as a central figure in tapestries and legends from the [Middle Ages](#). Gold [damask](#) draperies with a wreath and [lyre](#) motif to the sense of French opulence and frame the windows which look out on the University's [Heinz Memorial Chapel](#), itself an example of French [Gothic architecture](#) inspired by the [Sainte-Chapelle](#) in [Paris](#).

German



The German Classroom

German Classroom



Room 119

Dedicated July 8, 1938

Architect Frank A. Linder, Germany/U.S.

Style 16th century German Renaissance

The [German](#) Classroom was designed by German-born architect Frank A. Linder to reflect the 16th century [German Renaissance](#) as exemplified in the Alte Aula (Great Hall) of the [University of Heidelberg](#). The woodwork of the room was done by German-born [Philadelphia](#) decorator Gustav Ketterer and includes [walnut](#) paneling framing the blackboards, columns carved with [arabesques](#) flanking the two entrance doorways, and support broken-arch [pediments](#) surmounted by carved polychromed crests of the two oldest German universities: Heidelberg (1386) and [Leipzig](#) (1409). The doors are mounted with ornate [wrought-iron](#) hinges and locks, and their upper panels are decorated with [intarsia](#) depicting the central square of [Nürnberg](#) on the front door and the fountain of [Rothenburg](#) on the rear door. Carved in the [architrave](#) above the paneling are the

names of famous speaking philosophers, poets, musicians, artists, and scientists. The intarsia doors of the four corner cabinets feature tales from German folklore including [Parsifal](#) who searched for the [Holy Grail](#), [Siegfried](#) who was the hero of the [Nibelungenlied](#), the maiden wooed in [Goethe's](#) poem [Heidenröslein](#), and [Lorelei](#) who was the golden-haired [Rhine](#) maiden whose song lured sailors to destruction. Painted on the [escutcheon](#) above the front blackboard are words from [Friedrich Schiller's](#) *Das Ideal und das Leben*, "Stern endeavor, which no arduous task can shake, to the hidden fount of true attains." The rear wall has a quotation from [Johann Wolfgang von Goethe's](#) *Was Wir Bringen* which reads: "Great mastery results from wise restraint, and law alone points the way to liberty." Furniture includes the professor's leather upholstered chair stands on a small platform behind a burl walnut table and student tablet armchairs are walnut with scroll backs. [Wrought-iron](#) chandeliers are the work of German craftsman. The display case contains gifts of artworks and books from Germany's Ministry of Education. The [stained-glass](#) windows were designed by master stained glass artist [Charles Connick](#), however they were not completed until 1953 by Connick protege Frances Van Arsdale Skinner. The windows depict characters in the [Grimm Brothers'](#) fairy tales such as [Little Red Riding Hood](#), [Snow White and the Seven Dwarfs](#), [Hansel and Gretel](#), and [Cinderella](#).

Greek



The Greek Classroom

<i>Greek Classroom</i>	
	
Room	137

Dedicated	November 7, 1941
Architect	John Travlos, Athens
Style	5th Century B.C. Classical

The classical architecture of the [Greek](#) Classroom represents 5th-century BCE. [Athens](#), the [Golden Age of Pericles](#) and includes marble columns and a coffered ceiling. Colored details from the [Acropolis' Propylaea](#) and Erechtheum appear on white marble. The floor is paved with rectangular slabs of Dionessos Pentelic marble with dark vein. Gray Kokinara marble is used for the [dado](#). The room's columns and pilasters, as well as the coffered ceiling, bear painted decorations identical to those used on ancient Greek structures. The artwork was done by Athenian artist Demetrios Kokotsis who used the traditional [encaustic painting](#) method, employing earth colors and beeswax applied freehand which was then overlaid with 24-carat gold leaf rubbed on by polishing bones which required two men more than seven months to complete. White oak furniture, patterned after designs on Greek vases, is decorated with gold-leaf carvings and sunburst inlays of ebony. Student chair backs carry the names of Greek islands and towns. The professor's and guests' chairs bear the names of [Plato](#), [Aristotle](#), and [Socrates](#). A line from [Homer's Iliad](#) exhorts students to strive for nobility and excellence. The deep red wall color is repeated in the drapery valance with its Greek key design. Archives in the alcove cabinet record visits by the Queen of Greece, and by ecclesiastic and diplomatic officials. In 1940, one of two marble [pilasters](#) for the room that was being constructed in Greece from the [Mt Pentele](#) stone quarry used to build the [Parthenon](#), cracked shortly before shipping to the United States. With an invading [World War II](#) army massing on its borders, the column could not be replaced. Greek architect John Travlos ordered a matching crack etched into the undamaged column in order to preserve the symmetry. The marble was transported on the last ship to sail to America prior to the invasion and occupation of Greece. In November 1941, Travlos crouched under a blanket in his apartment closet listening to banned [BBC](#) radio broadcasts. Suddenly, Greek ecclesiastical music spouted from the radio, and Travlos heard the people of Pittsburgh dedicate his memorial to Greece.

Hungarian



The Hungarian Classroom

Hungarian Classroom



Room 121

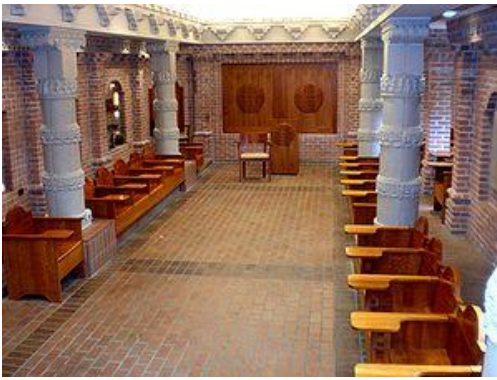
Dedicated September 29, 1939

Architect [Dénes Györgyi](#), Budapest

Style Folk Motif

[Dénes Györgyi](#), a professor at the Industrial Art School in [Budapest](#), won the [Hungarian Classroom](#) design competition sponsored by Hungary's Ministry of Education in 1930 which features [Magyar](#) folk art combined with deep wood carvings and historic stained glass windows. The walls of the room are [oak](#) veneer stained a soft tobacco brown. The wood in the panels was carefully selected and matched, so that the natural grains form interesting decorative patterns. The ceiling is 70 wooden cazettas suspended in a wooden frame and has a predominant hue of "[paprika](#) red", a color inspired by the peppers which are hung to dry over white fences in Hungary. The cazettas are decorated with folk motifs (birds, hearts, and [tulips](#)) in turquoise, green, and white were painted by Antal Diossy in Budapest. Joining the ceiling and walls is an inscription frieze with the first two stanzas of [Himnusz](#), the Hungarian National Anthem by [Ferenc Kölcsey](#). Above the blackboard is the coat of arms of the University of Buda which was founded in 1388. At the top is the crown of [St. Stephen](#), the patron saint of Hungary and its first Christian king. The student seats are made of oak and are unadorned except for stylized carved tulip ornaments on the back. A bench along the rear wall and guest chairs are upholstered in blue. Along the corridor wall, panels carved with floral, plant, and bird designs invoke a "tulip chest" which are the traditional hope chests of Hungarian village brides that are decorated with tulips. In the display case lined with soft blue velvet is an exhibit of Hungarian porcelain, lace, embroidery, and costumed dolls. Stained and painted glass windows depict the legend of Hungary's founding as well as important events in the nation's history and culture. The rear window depicts [King Nimrod](#) and his sons, [Hunor and Magor](#), who pursued a white stag from the east to the fertile [Danube](#) plain. Descendants of Hunor became the [Huns](#) and those of Magor became the Magyars. The bay windows commemorate historic figures and events of the [Middle Ages](#), [Renaissance](#), and 17th and 19th centuries. The oak entrance doors bears deep carvings of tulips, [pomegranate](#) leaves, daisies, and wheat. The door's center panel states the date of the room's completion in 1938. The carvings were made by American wood carvers of Hungarian birth from [plaster of Paris](#) models that were made in Budapest to ensure Magyar authenticity.

Indian



The Indian Classroom

Indian Classroom



Room 327

Dedicated January 9, 2000

Architect Deepak Wadhvani, A.I.A.

Style 4th-9th century Indian Renaissance

The [Indian](#) Classroom is modeled on a typical 4th-9th century AD courtyard from [Nalanda University](#), a [Buddhist](#) monastic university in [Nalanda](#). At its peak, the university's five temples and 11 monasteries covered 32 acres (130,000 m²) and attracted thousands of students from all over [Asia](#). The room depicts a classroom courtyard at Nalanda. The pale rose bricks, specially fabricated to reflect the hue and texture of the original, and form the walls, floor, pilasters, and niches. Six stone columns decorated with rosettes, swags, and fruit echo those found at Nalanda. The rear sculpture wall, a scaled down version of one at Nalanda's [Stupa](#) #3, bears images of six [Bodhisattvas](#). Flanking display cases hold replicas of ancient bronze sculptures found at the site. A watercolor [trptych](#) depicts male and female students at Nalanda as scholar-monk Silabhadra says farewell to 7th-century Chinese traveler [Xuanzang](#). Gurus taught classes in the courtyards, which were surrounded by residential cells. The [cherry](#) wood chalkboard doors and flanking cabinets bear carved seals of Nalanda University which feature recumbent deer above a [Sanskrit](#) inscription. Cast steel grilles in front of the windows, hand wrought into forms which reflect decorative elements of the columns, filter the light and soften the view of

the 20th-century outside world.

Irish



The Irish Classroom

Irish Classroom



Room 127

Dedicated May 18, 1957

Architect Harold G. Leask, Dublin

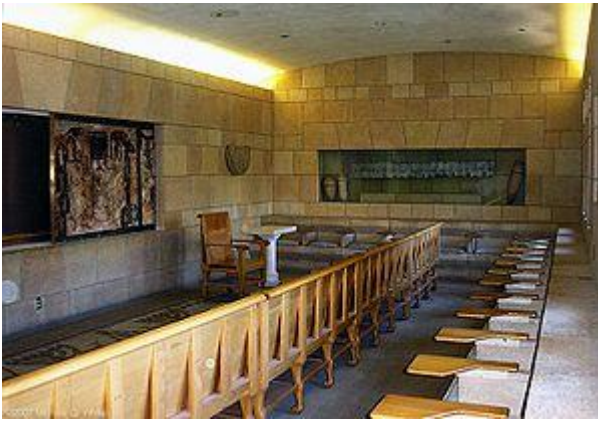
Style 500-1200 A.D. Irish Romanesque

The [Irish](#) Classroom is the smallest of the Nationality Rooms. The [limestone](#) room is designed in Irish Romanesque architecture, which flourished from the 6th to the 12th centuries and is similar in type, size, and materials to oratories first built on the west coast of Ireland. Adapted from [Killeshin](#) Chapel in [County Carlow](#), the triangular doorway gable is carved with human and animal masks against a background of zig-zag and beaded designs. The blackboard frame's pendent arches are carved with foliage, images of wolfhounds, and stylized cat masks. On the opposite wall a sculptured stone chest, under a monumental recessed arch, is patterned after a bishop's tomb in Cormack chapel. Its ornate sculpture depicts the "Great Beast," a greyhound-

like animal wreathed in [interlaced ornaments](#). On the chest rests a replica of the Gospels from the [Book of Kells](#). The wrought-iron case bears bird and beast designs drawn from the Book of Kells. Stained-glass windows portray famous teachers at three of Ireland's oldest centers of learning; [St. Finnian](#) at [Clonard](#), St. Columkille at [Derry](#), and [St. Carthagh](#) at [Lismore](#). Illuminations in the Book of Kells inspired the chair design, except for the wolfhound heads. The oak-beamed ceiling is characteristic of Irish oratories. The cornerstone, from the [Abbey of Clonmacnoise](#), is carved with the [Gaelic](#) motto, "For the Glory of God and the Honor of Ireland." The cornerstone conceals a container of earth from [North \(County Armagh\)](#) and [Southern Ireland \(County Meath\)](#).

[Gov. David L. Lawrence](#), [Art Rooney Sr.](#), founding owner of the [Pittsburgh Steelers](#), and James W. Knox, a member of the Pittsburgh Irish community, were on the room's organizing committee. After the assassination of President [John F. Kennedy](#), [Jacqueline Kennedy](#) ordered a Marine guard to deliver the Oval Office Presidential and American flags to [Evelyn Lincoln](#), private secretary to the president. In her will, Lincoln bequeathed the flags to the University of Pittsburgh for the Irish Room in honor of Knox. The John F. Kennedy scholarship for study in Ireland and a James W. Knox endowment for graduate study abroad were created from the proceeds generated from their auction.

Israel Heritage



The Israel Heritage Classroom

Israel Heritage Classroom



Room 337

Dedicated November 1, 1987

Concept	Alexander Kaufman
Architect	Martin Chetlin, A.I.A.
Style	1st century Israel Stone Structure

The [Israel](#) Heritage Classroom reflects the simplicity of a 1st-century [Galilean](#) stone dwelling or house of assembly, this room's benches are patterned after those in the 2nd-3rd-century [synagogue](#) of [Capernaum](#). The [Ten Commandments](#), carved in [Hebrew](#), grace the [oak](#) entrance door. Grapes, [pomegranates](#), and [dates](#) on the stone [frieze](#), copied from Capernaum, represent crops grown in the Galilee. On the window wall, an inscription discovered in the 6th-century [Rehob](#) synagogue cites the [Talmudic laws](#) governing the growing of crops each seventh year. A scroll fragment in the rear case replicates the [Dead Sea Isaiah Scroll](#) segment which contains the prophesy "They shall beat their swords into plowshares and their spears into pruning hooks..." Ancient wine jars flank the scroll. The professor's table, based on one found in Jerusalem's 1st-century burnt house, stands before a copy of the only existing stone [Menorah](#) which served as a functional [candelabrum](#). The quotation on the chair reads: "I learned much from my teachers, more from my colleagues, and most of all from my pupils." Three segments from the 6th-century [Dura Europos](#) murals grace the chalkboard doors, [Ezra the Scribe](#), reads the law; [Moses](#) brings forth water for the 12 tribes; and the sons of [Aaron](#) consecrate the Temple. Oak benches bear the names of the 12 tribes of Israel. The floor mosaic replicates one in the 6th century Galilean synagogue of [Beth Alpha](#).

Italian



 The Italian Classroom

Italian Classroom



Room 116

Dedicated May 14, 1949

Architect Ezio Cerpi, Florence

Style 15th century Italian Renaissance

The [Italian](#) Classroom reflects the serenity of a 15th century [Tuscan](#) monastery, with its traditional devotion to religion, art, music, and education. The rear choir stall bench and shuttered windows introduce the monastic theme. The blackboard doors recall an armadio, a cabinet behind an altar used to hold priestly vestments. The turquoise [cazetta](#) ceiling, embellished with carved, gold-leafed rosettes, was inspired by one originally in the San Dominico Convent at [Pesaro](#). In the [architrave](#), names of famous Italians are inlaid in olive wood. The lettering resembles that used in the inscription on the [Arch of Titus](#) in [Rome](#). Bay benches are cushioned in red velvet. The red tile floor is set in a herring-bone pattern similar to that of [Florence's Palazzo Vecchio](#). An original Florentine fireplace, made of sandstone from the quarries of [Fiesole](#), bears the carved [Latin](#) inscription, "O Lord, do Not Forsake Me." On either side stand [Savonarola chairs](#). Monastery bench designs, adapted for student use, are carved with names and founding dates of Italian universities. The oldest is the [University of Bologna](#), established in 1088. From the front of the room, a bronze bust of [Dante Alighieri](#) faces Giovanni Romagnoli's mural of [Elena Lucrezia Cornaro Piscopia](#), the first woman in the world to achieve a university degree when she was awarded both a master's and [Doctor of Philosophy](#) degree in 1678 by [University of Padua](#).

Japanese



The Japanese Classroom

Japanese Classroom



Room 317

Dedicated July 25, 1999

Design Hirokazu Nagase, Kyoto

Architect Norman Harai, A.I.A.

Style Minka

The [Japanese](#) Nationality Room celebrates traditional Japanese carpentry and woodcraft, evoking the mid-18th century [minka](#) which were houses of the non-ruling classes of Japan. This room is representative of minka that might be the residence of an important village leader in a farm village on the outskirts of [Kyoto](#) and the design represents the core rooms of the house: a plank-floored ima or household sitting room and the adjacent doma, an area with a compacted earthen floor used as an entry-way, for cooking and as a work space. The doma was

also a space for household life, where farm, business and craft activities could be carried out under a roof. In the past it also provided a place for drying grain during rainy weather. A central feature of the room is the massive, rough-hewn beam, the ushibari of Japanese [pine](#), supported by posts at the boundary of the ima and doma elements of the room. The main beam in this room had been carefully preserved by the carpenters in Japan for many years until a project could be found to appropriately utilize its unique curvature. To accommodate the weight concentrated on the primary post, the daikokubashira, the layout of the room has been designed so that this main post sits directly above the building's existing superstructure. The major posts are made of [zelkova](#), ([keyaki](#)), a hardwood with a distinctive grain pattern. The other beams are made of American pine. The posts and beams are connected without nails, using traditional joinery techniques. The ceiling is of [bamboo](#) with joined beams which would have allowed for the circulation of warm air from fireplaces below. The walls mimics the typical mud plaster walls through the use of textured wallpaper and wooden [wainscoting](#) for greater durability. The bay window is a structure not in keeping with traditional Japanese design and has been masked with panels that suggest shōji, sliding doors of lattice frames, covered with translucent paper. The ima is suggested with a plank wood floor covering the largest portion of the room. The floor toward the front of the room is made of a simulated earthen material to represent a portion of the doma where it meets the ima's wooden floor. Although the a traditional design would call for the wooden floor to be much higher than the dirt floor, this feature has been eliminated in the classroom for practicality. Located on the rear wall, is the [tokonoma](#), a raised alcove for the display of treasured objects, flower arrangements, and seasonal decorations. The tokonoma has been built in shoin-style, with shōji along its exterior side. The corner post, tokobashira, is made of [ebony](#) and the floor of the tokonoma is [tatami](#). The display cases at the rear of the room and along the interior wall contain artifacts in keeping with the period and include a [chagama](#) and [furo](#), an iron kettle with metal charcoal hearth/brazier combination, used in the "tea ceremony." While typical minka would have no chairs at all, in keeping with its function as a classroom, the classroom has wooden chairs designed and crafted specifically for students and are consistent in design with the rest of the room. Sliding wooden panels cover the blackboard at the front of the room. The interior surface of the entry door has been modified with a wooden treatment that suggests the sliding door that was the typical entrance to a house of this period.^[30]

Lithuanian



 The Lithuanian Classroom

Lithuanian Classroom



Room 129

Dedicated October 4, 1940

Architect Antanas Gudaitis, Kaunas

Style Folk Motif

The [Lithuanian](#) Classroom is dominated by a fresco depicting [Mikalojus Konstantinas Čiurlionis'](#) famous painting *The Two Kings* portrays the reverence Lithuanians have for their villages. This mural sets the tone for a room that pays tribute to the symbolism and love of nature and home reflected in Lithuanian folk art. The door's wooden planks are laid in a diamond pattern similar to those of many farm structures. At the center of the door is a carved rosette, symbol of fire. Above the entrance, a stylized sun between two horses' heads represents light and sound believed to ward off evil spirits. The [white oak](#) molding of intersecting [scallops](#) resembles decorations found on farm granaries or kleitis. Names of famous Lithuanians are carved on the frieze above the blackboard. The wall fabric is linen woven in a design called "The Path of the Birds." Its frame is of white oak and rare bog oak that acquires its deep hue while submerged in a marshy bog for decades. Lithuanian farmers would thus preserve prime trees in order to make furniture pieces that were treasured as heirlooms. The professor's desk is modeled after a household table and the lectern incorporates details of a spinning wheel spindle. Student chairs are carved with a design found on household utensils. The radiator enclosure is perforated with a design of wild [rue](#) leaves, the Lithuanian national emblem. Traditionally, a bride is crowned with a wreath of rue, symbol of chastity. Windows of handpressed glass bear leaded medallions in the form of sun ornaments often found on roadside shrines.

Norwegian



 The Norwegian Classroom

Norwegian Classroom



Room 151

Dedicated May 15, 1948

Architect Georg Eliassen, Oslo

Style Folk Motif

The [Norwegian](#) Classroom was designed in [Oslo](#) in an 18th century peasant style using Norwegian building techniques, painted decoration, and craftsmanship by architect Georg Eliassen just prior to the outbreak of [World War II](#). Plans for the room were sent on the last ship to leave [Petsamo](#) for the [United States](#) where they were completed by University Architect Albert A. Klimcheck. Walls of the main space are paneled with vertical overlapping [spruce](#) boards hand-rubbed with wax. The walls in the front of the room are painted a soft blue and decorated with floral designs reminiscent of the 18th century [rosemaling](#) technique.

Because living and bedrooms were often merged into one room during this era, two of the panels swing open as if they would reveal traditional built-in-beds, but instead conceal the blackboard. The room features high-sloped ceilings reflective of those in [Nordic](#) peasant homes that keep snow from accumulating during severe the

winters. Spruce boards are laid in a herringbone pattern slanting upward to a plane of flat boards decorated by two hand-carved, painted rosettes with a symbol for the [midnight sun](#). Wooden chandeliers bearing a painted design incorporating "1945", the year the room was opened, hang from the flat surfaces. The professor's section of the room has a low raftered ceiling.

The transition between the two parts of the room is indicated by a corner kleberstone fireplace in which [birch](#) logs were burned standing on end to assure that smoke would rise up the chimney. Windows are of handmade opalescent glass tinted pale yellow. Since a bay window is not a [Scandinavian](#) tradition, the area is plastered, paved with [slate](#), and treated as a traditional alcove. The student tablet armchairs are low-backed and the professor's chair is of a typical [Viking](#) design with carved heads of beasts and an intertwining dragon motif that traditionally serves as a symbol that protects against evil.

The room features a century-old [grandfather clock](#) with an engraved dial and a case that is painted to match the wall decorations of the smaller room. Above the rear wall bench and flanked by corner [display cabinets](#) decorated with rosemaling, hangs a framed copy of a 1695 Norwegian woolen [tapestry](#) depicting the [Biblical](#) parable of the five wise and five foolish virgins^[31]

Polish



The Polish Classroom

Polish Classroom



Room 126

Dedicated	February 16, 1940
Architect	A. Szyszko-Bohusz, Cracow
Style	16th century Polish Renaissance

The [Polish](#) Classroom was inspired by rooms in [Cracow's Wawel Castle](#), for centuries the residence of kings. The astronomer [Nicolaus Copernicus](#), claimed as Polish, and the science that his theories revolutionized, is also a major theme of the room. A replica of the famous [Jan Matejko](#) portrait of Copernicus shows him as a young man pursuing his study of the universe from a workshop on the roof of his uncle's house in Allenstein ([Olsztyn](#)). In the bay stands an enlarged replica of the 16th-century [Jagiellonian globe](#), one of the oldest existing globes to depict [North America](#) as a separate continent. The original globe was only eight inches high and was designed to operate as a clock and calendar and it took a [metalsmith](#) in Cracow five years to complete the large globe in this room.

Artists from Cracow also came to Pittsburgh to paint the ceiling of 18-foot (5.5 m) beams with informal geometric [Renaissance](#) decorations. The room is illuminated by a bronze chandelier bearing a stylized [Polish eagle](#). The [walnut](#) seminar table was copied from one in a state dining room at Wawel Castle. The windows combine hexagonal handmade [roundels](#), similar to those in Wawel Castle, with stained-glass coats of arms representing Polish institutions of higher education. The cornerstone is a fragment of Gothic cornice preserved from the [Collegium Maius](#) (1369), the ancient [Jagiellonian Library](#). Poland's music is represented by the original manuscript of [Ignace Paderewski](#)'s only opera, [Manru](#), which is displayed in the archive cabinet.

Romanian



 The Romanian Classroom

Romanian Classroom



Room 130

Dedicated May 16, 1943

Architect N. Ghica-Budești, Bucharest

Style 17th century Byzantine

The [Romanian](#) Classroom was designed in [Bucharest](#) by Nicolae Ghica-Budești. The carved doorframe is characteristic of stone thresholds of Romanian monasteries and is made is of American [limestone](#) selected due to its similarity to Romanian limestone used in the [royal palace](#) at Bucharest. The entrance door of the Romanian Classroom is ornately carved [oak](#) reminiscent of [Byzantine churches](#) in Romania. The words of [Vasile Alecsandri](#), one of the greatest Romanian poets of the 19th century, are carved overhead in the stone door frame from his *Ode to the Year 1855*: "The Romanian is like the mighty rock which amidst the waves of the stormy and majestic sea forever remains unmoved." The floor is laid in square blocks of pink [marble](#) imported from quarries at Rușchița. The black boards are set in arched oak panels, carved in a manner of icon screens in [Eastern Orthodox](#) and [Greek Catholic](#) Romanian churches. These are separated by carved-twisted rope which suggests the [Roman](#) origin of may of Romania's artistic traditions. Ancient original icons from Romania depicting the [Virgin and Child](#), [Christ](#), the [Dormition of the Virgin](#), and [Saint Mark](#) are embedded in the upper section of each panel.

White arca paint mixed with color gives the smooth pastered walls a bluish pink tint. A Byzantine-style [mosaic](#), executed by Bucharest ceramicist Nora Steriade in gold, turquoise, bronze, ruby red, and black pieces of glass, is embedded in the rear wall. The lettering for the inscription and for the entrance text is the work of Alexander Seceni. The mosaic depicts [Constantin Brâncoveanu](#), Prince of [Wallachia](#), who refused to recant the [Christian faith](#) even at the cost of his own life and the lives of the male members of his family. The six windows have rounded [Romanesque](#) heads reflecting tradition brought from Rome when they conquered the original [Dacian](#) settlers in 106 AD.


Two small window casements are deeply recessed and have marble window ledges. The four large center windows, form an alcove shut off from the main part of the room by an iron grilled gates wrought in Romania and hung in an arch. These gates swing back in folded sections against the plastered wall. A slab of polished marble tops the wrought-iron [radiator](#) grille. Yellow silk draperies frame the windows and ancient icons befitting the season and holidays are exhibited in the alcove which is reminiscent of an icon shrine in an

Orthodox Church. The student chairs are of dark oak hand-carved by Romanian peasant artisans using simple [pocketknives](#) and each [splat](#) bears a different design. The professor's reading desk was adapted from an Eastern Orthodox Church [lectern](#).^[32]

Russian



 The Russian Classroom

<i>Russian Classroom</i>	
	
Room	153
Dedicated	July 8, 1938
Design	Andrey Avinoff , Tultchin
Style	Byzantine and Folk Motifs

The Russian Classroom contains folk ornamentation with traditional motifs from [Byzantium](#), the spiritual center of Russia. The seminar table is made of oak slabs matched in contrasting grain and held together by ornamental keys. The cut-out apron is characteristic of massive tables in the [Vologda](#) district. The back of each student's chair has a cruciform circle pattern surmounted by triangles carved with symbols of regional or stylistic significance including the [reindeer](#) which symbolizes the [tundra](#) and the [surgeon](#) that represents the [Volga](#)

[River](#). The professor's chair has a back of spirals surmounted by two [peacocks](#) worshipping the tree of life. The podium is ecclesiastic in character and suggests the anoloi used in Orthodox churches to support heavy Bibles. The blackboard is patterned after a [trptych](#), or three-leaved frame which holds icons.

The doors of the blackboard are a grille of wooden spirals backed by red velvet. Above them is a carved panel with Sirin and Alcanost, the twin birds of Russian folklore that depict joy and sorrow as indistinguishable. A [dado](#) or low [wainscot](#) of simple horizontal oaken boards surrounds the room and incorporates the blackboard, the corner cupboard, and kiot which is a [Slavic](#) term for a wall frame treated as a piece of furniture. Within the kiot hangs an vishivka ([appliqué](#) and [embroidery](#)) banner of [Saint George](#), patron saint of [Moscow](#) since the 15th century. The banner was made with pieces of 16th and 17th century fabric from [Venice](#) and [Paris](#) and is an example of needlework once popular with the Russian aristocracy. The words "Valorous youth victorious over forces of evil and darkness" are carved in both [Russian](#) and English below the banner. A copy of the Avinoff family icon in the room depicts the miraculous saving of the city of Kitej from a [Tartar](#) invasion in the 14th century. The ceiling is cornered with designs resembling those used to form traditional Easter cakes and which symbolize the four seasons, with a [bud](#) for Spring, a [sunflower](#) for summer, [grapes](#) for Autumn, and a [pine cone](#) for Winter. A [wrought iron](#) chandelier was created by Russian-born Hyman Blum.

Scottish



The Scottish Classroom

Scottish Classroom



Room

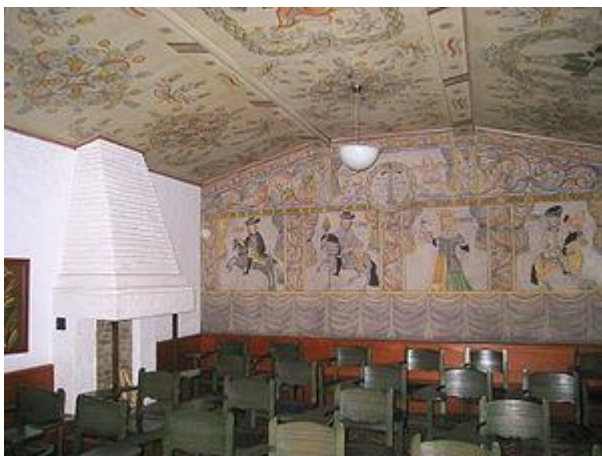
139

Dedicated	July 8, 1938
Architect	Reginald Fairlie, Edinburgh
Style	17th century

The [Scottish](#) Classroom was designed by [Reginald Fairlie](#) of [Edinburgh](#) in the period style of the early 17th century. The woodwork is carefully selected and treated English [pollard](#) oak. The names of distinguished Scots are carved in the ribbon bands of the panels and include [David Livingstone](#) who was an African missionary and explorer, [Robert Louis Stevenson](#) who authored *Treasure Island*, and [Alexander Fleming](#) who discovered [penicillin](#). The inscriptions above the doors and the rear cabinet are from "[The Brus](#)" by the 14th century Scottish poet [John Barbour](#). The room's oak doors were copied from the entrance of [Rowallan Castle](#) in [Ayrshire](#). A 16th century Scottish proverb above the blackboard was taken from the [Cowgate](#) in Edinburgh and is known as "the Scottish Golden Rule" which reads: "Gif Ye did as Ye sould Ye might haif as Ye would." The [plaster](#) frieze was adapted from the plaster frieze at [Elcho Castle](#) in [Perthshire](#) and incorporates symbols of 14 [Scottish clans](#) which had members on the room committee, such as the buckle of the [Leslie Clan](#). The [thistle](#), Scotland's national flower, is rendered on the cornerstone as a tree-of-life. The [overmantel](#) of the Scottish [sandstone](#) fireplace that is flanked by carved kists, or log storage chests, is dominated by a portrait of poet [Robert Burns](#) that is copied from an original by [Alexander Nasmyth](#) which hangs in the [National Portrait Gallery of Scotland](#). Above the portrait is the cross of [St. Andrew](#), Scotland's patron saint. The bronze statuettes on the mantel near an arrangement of dried [heather](#) are miniature replicas of heroic statues at the gateway to [Edinburgh Castle](#) and represent the 13th-century patriot [Sir William Wallace](#) and the 14th century freedom fighter, [Robert the Bruce](#), both of whom were popularized in the movie *Braveheart*.

Medallions in the bay windows represent the coats of arms of the four Scottish universities: [Glasgow](#), [St. Andrew's](#), [Aberdeen](#), and [Edinburgh](#). The medallions in the front and rear windows are of [Elgin](#) and [Melrose Abbeys](#) which were 13th and 16th century seats of learning. The draperies are of [crewel-embroidered](#) linen. The rooms lighting fixtures were inspired by an iron [coronet](#) in Edinburgh's John Knox Museum that was retrieved from the battlefield of [Bannockburn](#) at which Scotland won its independence from England in 1314. Student's seats resemble a chair that belonged to [John Knox](#). An old Scottish church furnished the pattern for the reading stand. The rear cabinet, based on an [aumbry](#) or weapon closet, contain artifacts such as [pewter](#) and [china](#) used at Soutar's Inn in Ayrshire that was frequented by Robert Burns. The panels in the doors, mantel, and in-the-wall cabinets were carved in Edinburgh by Thomas Good and then shipped to Pittsburgh. The cabinetwork was done in the shops of Gustav Ketterer of [Philadelphia](#). [Wrought ironwork](#) was done by [Samuel Yellin](#). Cut into stone above the doorways are the thistle and the [Lion Rampant](#), the Scottish emblem incorporated into [Britain's coat of arms](#). The chairman of the original Scottish Classroom Committee was [Jock Sutherland](#).

Swedish



 Swedish Nationality Room.

Swedish Classroom



Room 135

Dedicated July 8, 1938

Architect Linton R. Wilson


Adviser [Carl Milles](#), Stockholm

Style Folk Motif

The [Swedish Classroom](#) reflects a peasant cottage and contains murals in the style of the 18th-century painter from [Hälsingland](#), [Gustav Reuter](#). The hooded brick fireplace derives from an original in the [Bollnäs](#) cottage of [Stockholm's](#) outdoor [Skansen](#) museum. The brilliant white walls and fireplace are constructed of 200-year-old handmade bricks. A subtle sense of humor associated with the [Swedish people](#) is revealed in the room's paintings. A wall fresco secco depicts of [Three Wise Men](#) dressed as [cavaliers](#) riding to [Bethlehem](#), in two directions. In their midst is Sweden's patron saint, [St. Catherine](#). The sloped ceiling bears decorations in which the central figure is the [Archangel Gabriel](#), seen as a droll trumpeter with two left feet. Nearby are renditions of Justice and Knowledge surrounded by groupings of flowers. Justice uses her blindfold to hold scales that appear balanced but have an off-center fulcrum. Knowledge seems puzzled as she contemplates writing on her slate with a quill pen. The classroom's oak furniture is stained a muted gray-blue tone, similar to that found in old Swedish homes. Floral designs, in colors that complement the amber tone of fir wall benches, brighten the door and archive cabinet. The red brick floor is set in a [herringbone](#) pattern.

Syrian-Lebanon

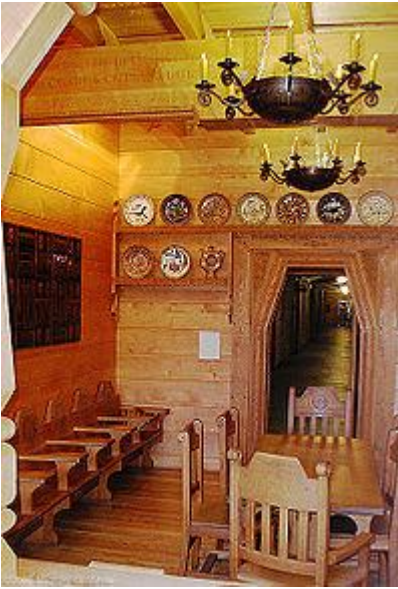


 The Syria-Lebanon Room

<i>Syrian-Lebanon Room</i>	
Room	160
Dedicated	June 28, 1941
Architect	unrecorded
Style	18th century Damascus

Originally a library in a wealthy Damascan merchant's home, the [Syria-Lebanon](#) Room was moved intact to its location in the Cathedral of Learning following a six year effort to fund and install the room by the Syrian and Lebanese communities in Pittsburgh. Because of the fragility and pricelessness of the furnishing, it has been closed for class use and is one of two display rooms. The [linden](#)-paneled walls and ceilings are decorated with “[gesso](#) painting,” a mixture of chalk and glue applied by brush in intricate relief, then painted and overlaid with silver and gold leaf. The room features a (now improperly oriented) [mihrab](#) with a stalactite vault traditionally housing the [Koran](#) and [prayer rug](#). Set in the walls are book cabinets and display shelves. The room is illuminated by an old mosque lamp of perforated copper with handblown glass wells that originally held oil, water, and wicks. The sofas, from the Arabic word "suffah", are covered in satin and rest on a dark red and white marble foundation. The marble floor slopes down at the entrance where visitors would remove their shoes before entering. In 1997, a glass-paneled French-style door to the room was added to allow the room to be visible from passers-by. The doors were patterned after a grille design found on the windows of the 18th century Ibn Room in the Islamic section of the [Metropolitan Museum](#) in [New York](#).

Ukrainian



 The Ukrainian Classroom

Ukrainian Classroom



Room 341

Dedicated June 17, 1990

Design Lubomyr E. Kalynych

Architect Walter R. Boykowycz, A.I.A.

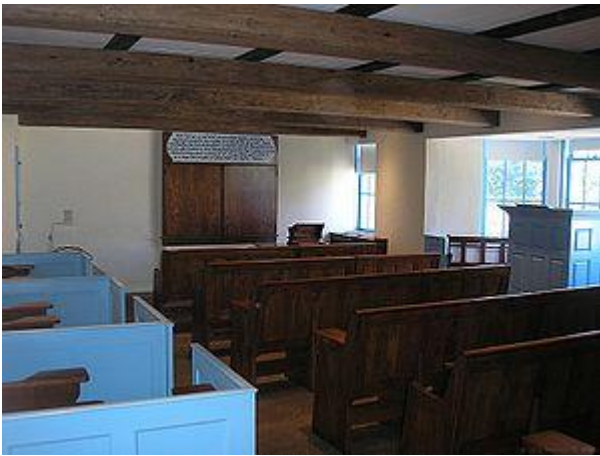
Style 17th-18th century Ukrainian Baroque

The [Ukrainian](#) Classroom is designed in [Baroque](#) style with richly carved wood, colorful ceramics, and intricate metalwork in this adaptation of a nobleman's reception room. The entrance has an archaic trapezoidal form with carved motifs of water (chevron), wheat, and sunflowers. The [lintel](#) inscription commemorates Ukraine's millennium of [Christianity](#) (988-1988). The stove tiles depict festival practices and daily life. A pokutia, or

place of honor, is defined by the benches and the traditional icons of [St. Nicholas](#), the [Mother of God](#), [Christ](#) the Teacher, and [St. George](#).

The chalkboard doors bearing the Tree of Life are surmounted by three [Cyrillic](#) alphabets used in Ukraine in the 11th, 17th, and 19th centuries. On the right wall, a copper bas-relief depicts the development of Ukrainian culture over the millennia. It portrays cultural centers, historical figures, rituals, monuments, and the evolution of Ukrainian ornament. The massive crossbeam's elaborate carvings include a protective solar symbol and a quotation from Ukraine's bard [Taras Shevchenko](#) (1814–1861): "Learn, my brothers! Think and read ... Learn foreign thoughts, but do not shun your own country!" Beyond the wood posts, reminiscent of a gallery, the display case houses traditional Ukrainian art and crafts.

Welsh



The Welsh Classroom

Welsh Classroom



Room 342

Dedicated June 1, 2008

Architect Martin Powell, Katherine Horstman, Richard

Freeman, Yaso Snyder

Style 18th century [Non-Conformist](#) chapel

The [Welsh](#) Classroom, the newest of the 27 such rooms in the Cathedral of Learning, is perhaps the longest in coming, as reservations for a Welsh room were originally requested in the 1930s.^[36] The existing room, installed on the third floor of the Cathedral of Learning, is patterned after the Pen-rhiw Chapel at St. Fagan's Museum of Welsh History near [Cardiff](#) and represents a traditional 18th century Welsh capel, or chapel, which often became the center of village social life.^[37] By this period, the [English](#) ruled the country and imposed law requiring [English](#) as the official language of the courts and churches. In order to worship and hold church services in their native [Welsh language](#), and spurred on by the non-conformist movement started by the [Protestant Reformation](#), the Welsh people met in secret locations such as barns or homes, as suggested by the simple white walled capel modeled in this Nationality Room. The minister would live at one end as depicted by the display case with dishes and pottery that would be found in a Welsh kitchen and the long oak case clock seated on a Welsh slate foundation opposite the main blue door. The clock, considered one of the most important furnishings in a Welsh home, has, instead of numbers, a painted square face that spells out "Richard Thomas" suggesting that he was both the maker and owner of the clock. The bay window serves of the focus of the Welsh chapel worship, including a blue raised pulpit with a view of the entire congregation and two Deacon's benches from which to monitor the actions of the minister and congregation.

At the other end of the room is a table bearing a lectern, as such worship places would often become a school room for both children and adults during week days. Above the chalk board is the [Lord's Prayer](#), written in [Welsch](#).^[38] Pew benches of [pine](#) face the lectern. Along the wall, larger and more comfortable blue-painted pew boxes with wooden floors, often also serving as barn cattle stalls, would have served wealthier families who would sometimes bring straw, blankets, hot bricks, or dogs to keep them warm. To reflect the simplicity of such meeting places, the ceiling beams are made of [poplar](#) and flooring suggests a typical capel dirt floor. The carved stone dragon over the doorway, the long-time Welsh national symbol, represents the legendary victory of the Red Dragon over the White Dragon of numerous tales of medieval Wales and represents the triumph of Good over Evil.

Yugoslav



The Yugoslav Classroom

Yugoslav Classroom



Room 142

Dedicated March 31, 1939

Architect [Vojta Braniš](#), Zagreb

Style Folk Motif

The [Yugoslav Classroom](#) was designed by Professor [Vojta Braniš](#), a sculptor and director of the Industrial Art School in [Zagreb](#). The walls are paneled in [Slavonian](#) oak and hand-carved with geometric figures and the old Slavonic heart design which is combined with a running geometric border, a favorite with [South Slavs](#). This type of work, known as "notch-carving", was traditionally done with a penknife as pastime of peasants. On the corridor wall is a specially designed coat of arms featuring a double-headed eagle symbolizing the religious influences of Eastern [Empire of Byzantium](#) and Western [Empire of Rome](#) along with the founding dates of the universities in [Belgrade](#), [Ljubljana](#), and [Zagreb](#). The ceiling is carved with intricate [Croatian](#), [Slovenian](#), and [Serbian](#) folk motifs and the wooden chandeliers are similar to those in the [White Palace](#) in Belgrade. The professor's chair and guests chairs were carved by students at the International Art School in Zagreb, and each spindle of the chairs bears a different notched design. At the window, a bronze sculpture by Vojta Braniš, "Post-War Motherhood", depicts a barefoot mother nursing her child whom she has protected during the long months of war. In the display cabinet is a lace portrayal of the [Madonna](#) of Brežje by Slovenes Leopoldina Pelhan and her student Mila Božičkova which took six months to complete and was inspired by the story of a lace Madonna created by the villagers of [Gorica](#) in order to replace a priceless painting during [World War I](#). The ceiling squares contain one of the three alternating ceiling ornaments suggesting flowers, stars, the sun, and other radiating geometric patterns, which are organized into a matrix of 9 by 7 squares.

Above the paneled walls, six portraits depict prominent Yugoslavs. On the front wall are portraits of [Vuk Stefanović Karadžić](#) (1787–1864) who compiled the Serbian dictionary and collected, edited, and published Serbian national ballads and folk songs; and Croatian statesman [Bishop Josip Juraj Strossmayer](#) (1815–1905) who was known for his efforts to achieve understanding between the [Roman Catholic](#) and [Greek Orthodox](#) churches, founder of the Yugoslav Academy of Sciences and Arts (now the [Croatian Academy of Sciences and Arts](#)). On the corridor wall are likenesses of [Baron George von Vega](#) (1754–1802), a Slovenian officer in the

[Austrian](#) army and mathematician recognized for various works including a book of logarithm tables; and [Petar Petrović Njegoš](#) (1813–1851), the last prince-bishop of [Montenegro](#), who was celebrated for his poetry. Represented on the rear wall are [Rugjer Bošković](#) (1711–1787), a Croatian scientist distinguished for his achievements in the fields of mathematics, optics, and astronomy; and [France Ksaver Prešeren](#) (1800–1849) who is considered one of the greatest native-language Slovenian poets.

The Yugoslav Classroom's Executive Committee was first organized in 1926 under the chairmanship of Anton Gazdić, the president of the [Croatian Fraternal Union](#). After his death in September 1933 the new chairman was Steve Babić, the previous vice-chairman, and the new vice-chairwoman became Catherine Rušković McAleer. Famous sculptor [Ivan Meštrović](#) was a great supporter and gave two of his works to the University, one a bust of [Mihajlo Pupin](#) and the other a self portrait. The Classroom was designed to portray the culture and traditions of the [Yugoslavs](#), who were considered as inhabitants of the various *Yugoslavian regions*: [Croats](#), [Dalmatians](#), [Slavonians](#), [Slovenians](#), [Serbians](#), [Bosnians](#) and [Montenegrians](#).

Proposed rooms: The University has received room reservation requests from nine additional Nationality Room Committees which are in various stages of fund raising and room design. Most likely the next room to be completed will be the Turkish Room which is currently^[when?] hiring craftsman to begin construction. Ömer Akin, a professor at [Carnegie Mellon University](#), will oversee the architectural plans for the Turkish room. New rooms are slated to cost more than \$300,000-\$400,000. [The Pitt News](#) (the university's student newspaper) reported that the Swiss nationality room committee named [Ben Roethlisberger](#), the quarterback of the [Pittsburgh Steelers](#), an honorary member of their committee.

- Danish
- [Finnish](#)
- [Iranian](#)
- [Korean](#)
- [Latin American & Caribbean](#)

- [Philippine](#)
- [Swiss](#)
- Thai^[45]
- [Turkish](#)

Gallery



Wikimedia Commons has media related to: [Nationality Rooms](#)



• Austrian Room



Chinese Room



Czechoslovak Room



German Room



Hungarian Room



Italian Room



Scottish Room



Yugoslav Room

<http://www.pitt.edu/~natrooms/>



Welcome to the Nationality Rooms VR Tour!

You will need the free **QuickTime Plugin** to view the VRs and to listen to the sound clips. In addition, you will need the free **Adobe Flash Player**. If you do not have the plugins, you can get both by clicking on the following buttons:



After you have both plugins installed...

Start your tour ▶



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This Web site was built at the [Center for Instructional Development & Distance Education](#).

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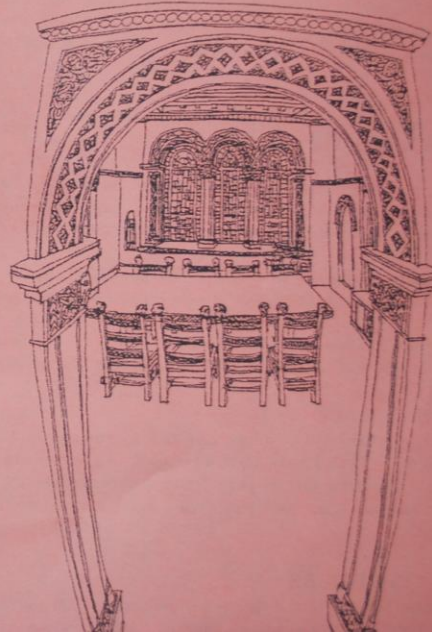
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STYLES OF ARCHITECTURE
IN THE
NATIONALITY ROOMS

African Heritage	Asante	18th century
Armenian	Medieval	10th-12th c.
Austrian	Baroque	18th century
Chinese	Chinese Empire	18th century
Czechoslovak	Folk	
Early American	New England Colonial	17th century
English	Tudor-Gothic	16th century
French	French Empire	18th century
German	German Renaissance	16th century
Greek	Classical	BC 5th century
Hungarian	Folk	
Indian	Indian Monastic	7th century
Irish	Irish Romanesque	6th - 12th c.
Israel Heritage	Ancient Stone Structure	AD1st century
Italian	Italian Renaissance	15th century
Japanese	<i>Minka</i> Style	18th century
Lithuanian	Folk	
Norwegian	Folk	
Polish	Polish Renaissance	16th century
Romanian	Byzantine	17th century
Russian	Byzantine & Folk Motifs	17th century
Scottish	Scottish Gentry	17th century
Swedish	Folk	
Syria-Lebanon	Damascus Palatial	18th century
Ukrainian	Ukrainian Baroque	17th-18th c.
Welsh	Non-Conformist Chapel	18 th century
Yugoslav	Folk	

THE
NATIONALITY
CLASSROOMS

at the University of Pittsburgh



Classrooms that Teach

A visit to the Nationality Rooms in the University of Pittsburgh's monumental Cathedral of Learning will take you around the world in 90 minutes.

These internationally famous Rooms are gifts to the University from the city's ethnic communities. Of museum quality, often designed by architects abroad, 27 Rooms adapt Classical, Byzantine, Romanesque, Baroque, Renaissance, Tudor, Empire, *Minka* and folk styles to recreate cultural periods prior to 1787, the year the University was founded.

THE ROOMS

You will experience a mini-tour of heritages that transports you from 5th century BC Greece to 18th century Ukraine.

Authentic period furnishings combine with carved stone, stained glass, sculpted and inlaid wood to provide unforgettable glimpses of European, Scandinavian, Middle Eastern, African and Asian cultures.

Trained guides are familiar with the historical figures, myths, art, religions, and events depicted in the Rooms and can adapt their tours to children, the handicapped and special interest groups. The Rooms are decorated in traditional holiday styles from mid-November through mid-January. An Open House occurs on a Sunday in early December.

A GOTHIC PLACE

The 42-story Cathedral of Learning, long known as the "world's tallest schoolhouse", is located in the heart of Oakland. Its dramatic height invites the visitor to explore the great Commons Room whose soaring Gothic arches provide the hub for the Nationality Rooms on the first and third floors.

OPERATING HOURS

Monday-Saturday: 9 a.m. – last tour dispatched at 2:30 p.m.

Sunday & holidays: 11 a.m. – last tour dispatched at 2:30 p.m.

The Gift Center closes at 4:00 p.m.

10/09

Visitors begin their tour at the Information and Gift Center (near the Fifth Avenue entrance), which sells handcrafted items from around the world, as well as videos, jewelry, postcards and publications. Visitors are encouraged to visit the rooms all days **except** Thanksgiving Day, December 24, 25, 26, and January 1.

• AUDIO TOURS

Narrated tours are available on weekends and every day from May through August.

• GUIDED TOURS –

Guided tours are offered without reservations the day after Thanksgiving, December 27, 28, 29, 30, 31. The Information Center opens at 10:00 a.m. on those days only. Tours are dispatched beginning at 10:30 a.m. with the last tour leaving at 2:30 p.m. **To schedule a group guided tour** for 10 or more, call 412.624.6000 as early as possible, but at least two weeks in advance.

- **SELF-CONDUCTED TOURS** - As most of the rooms are functioning classrooms, their availability varies. When some rooms are in use, visitors are given a map and may buy a "Brief Descriptions" (\$1.25) booklet to enhance the self-conducted tour. **For narrated tours of the third floor rooms, lift the toggle switch on the light control panel in each room.**

ADMISSION FEES

Adults: \$3.00

Youths (ages 8-18): \$1.00

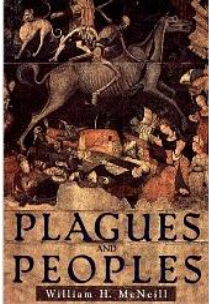
Fees are subject to change without notice.

The building is handicap accessible, with convenient parking, restrooms and a food court (Monday – Friday).

For information, please call 412.624.6000 or, on the web,

<http://www.pitt.edu/~natrooms>

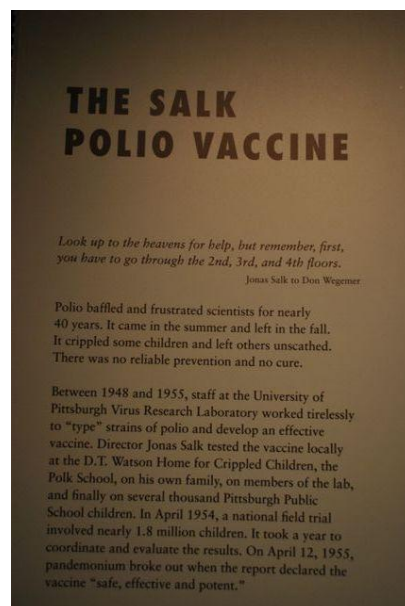
M. Pandemics and Pittsburgh



World History Theme


Disease and Medicine in World History as a subject examines the origin and spread of diseases and their treatment from ancient Egypt to present-day America and Europe. World historians have studied the global impact of epidemic infectious diseases on the conquest of Mexico (by smallpox as much as by the Spanish), the place of the bubonic plague in China, the role of typhoid epidemics in European history and concluded that the history of disease is the history of humankind. William McNeill in a landmark work in world history, *Plagues and Peoples*, paid special attention to the Black Death of the 13th and 14th centuries, which killed millions across Europe and Asia. McNeill noted that 10,000 people in Constantinople alone were dying each day from the plague. McNeill's assertion that "in any effort to understand what lies ahead the role of infectious disease cannot properly be left out of consideration" takes on new significance in view of HIV and the Avian flu.

1. Polio and Pittsburgh



Adapted from: Pittsburgh: "A Tradition of Innovation", Exhibit at the Senator John Heinz History Center, currently on exhibit. The exhibit is covered visually and in content in the pages of Western Pennsylvania History Vo. 92, no. 1 (Spring 2009). See also markers at http://www.waymarking.com/waymarks/WM8E0_Salk_Polio_Vaccine



 [Salk Polio Vaccine](#)
in [Pennsylvania Historical Markers](#)

Marker Text:

Pioneering research here at the University of Pittsburgh's Virus Research Laboratory from 1948 to 1955 produced the world's first polio vaccine. Led by Dr. Jonas Salk, researchers' innovations resulted in a breakthrough that was announced on April 12, 1955. Subsequent inoculations of school children virtually eradicated polio in the United States by 1962. Warning: Good luck getting a parking space near Pitt Medical Center if you want to visit!

Marker Name: Salk Polio Vaccine

County: Allegheny

Location: Salk Hall, Univ. of Pittsburgh, Terrace St. at Sutherland Dr., Pittsburgh

Category: Invention, Medicine & Science

Website: [\[Web Link\]](#)

Introduction and World Historical context:

Polio is a highly infectious disease that kills and cripples children. Polio had been endemic for thousands of years until the mid-twentieth century when the development of vaccines against polio by Drs. Jonas Salk and Albert Sabin offered the first hope for prevention and control. At the birth of the Global Polio Eradication Initiative (GPEI) in 1988, polio was endemic in more than 125 countries on five continents, and attacked 350,000 children each year. The GPEI is a public-private partnership led by the World Health Organization (WHO), the Department of Health and Human Services' Centers for Disease Control and Prevention, UNICEF, and Rotary International, and represents a coordinated, global effort to eradicate polio everywhere. Since 1988, the world has made remarkable progress toward polio eradication. The Americas, Europe, and the Western Pacific have been certified as polio-free. Now only four countries -Afghanistan, India, Nigeria, and Pakistan- still have endemic polio transmission. In addition, global polio cases dropped 34% from 2006 (1,997 reported cases) to 2007 (1,315 reported cases), and 24 of the 27 re-infected countries have stopped polio outbreaks. Asia in particular has seen improvements particularly in the significant reduction of the most virulent form of polio. We have never been closer to the goal of eradicating polio.

Jonas Salk in Pittsburgh

Jonas E. Salk (October 28, 1914 – June 23, 1995) was an [American medical researcher](#) and [virologist](#), best known for his discovery and development of the first safe and effective [polio vaccine](#). He was born in [New York City](#) to parents from [Ashkenazi Jewish Russian](#) immigrant families. Although they themselves did not have much formal education, they were determined to see their children succeed. While attending [New York University School of Medicine](#), he stood out from his peers not just because of his academic prowess, but because he chose to do medical research instead of becoming a physician.

Until 1955, when the Salk vaccine was introduced, [polio](#) was considered the most frightening public health problem of the [post-war United States](#). Annual [epidemics](#) were increasingly devastating. The 1952 epidemic was the worst outbreak in the nation's history. Of nearly 58,000 cases reported that year, 3,145 people died and 21,269 were left with mild to disabling paralysis,^[1] with most of the victims children. The "public reaction was to a plague", said historian William O'Neill. "Citizens of urban areas were to be terrified every summer when this frightful visitor returned." According to a 2009 PBS documentary, "Apart from the atomic bomb, America's greatest fear was polio."^[2] As a result, scientists were in a frantic race to find a way to prevent or cure the disease. [U.S. president Franklin D. Roosevelt](#) was the world's most recognized victim of the disease and founded the organization that would fund the development of a [vaccine](#).

In 1947, Salk accepted an appointment to the [University of Pittsburgh School of Medicine](#). In 1948, he undertook a project funded by the [National Foundation for Infantile Paralysis](#) to determine the number of different types of polio virus. Salk saw an opportunity to extend this project towards developing a vaccine against polio, and, together with the skilled research team he assembled, devoted himself to this work for the next seven years. The field trial set up to test the Salk vaccine was, according to O'Neill, "the most elaborate program of its kind in history, involving 20,000 physicians and public health officers, 64,000 school personnel, and 220,000 volunteers." Over 1,800,000 school children took part in the trial.^[3] When news of the vaccine's success was made public on April 12, 1955, Salk was hailed as a "miracle worker", and the day "almost became a national holiday." His sole focus had been to develop a safe and effective vaccine as rapidly as possible, with no interest in personal profit. When he was asked in a televised interview who owned the patent to the vaccine, Salk replied: "There is no patent. Could you patent the sun?"

In 1960, he founded the [Salk Institute for Biological Studies](#) in [La Jolla, California](#), which is today a center for medical and scientific research. He continued to conduct research and publish books, including *Man Unfolding* (1972), *The Survival of the Wisest* (1973), *World Population and Human Values: A New Reality* (1981), and *Anatomy of Reality: Merging of Intuition and Reason* (1983). Dr. Salk's last years were spent searching for a vaccine against [HIV](#).

See also Sheldon Watts, *Epidemics*, John M. Barry, *The Great Influenza*; Jared Diamond, *Guns, Germs and Steel*.

N. Environmental Issues



WORLD HISTORY THEME

Since around 1500 C.E., humans have shaped the global environment in ways that were previously unimaginable. World Historians explore the connections between environmental change and other major topics of early modern and modern world history, such as population growth, commercialization, imperialism, industrialization, the fossil fuel revolution, and more. Rather than attributing environmental change largely to European science, technology, and capitalism, most world historians see series of culturally distinctive, yet often parallel developments arising in many parts of the world, leading to intensified exploitation of land and water.

For Pennsylvania:

[Environmental Heritage Topics](#)

[Environmental Heritage](#)

[Environmental Heritage Timeline](#)

[Environmental Archives](#)

[Leaders](#)

[History of Environmental Programs](#)

[Events that Shaped our Environment](#)

[Johnstown Flood 1889](#)

[Austin Flood 1911](#)

[Gypsy Moths 1932](#)

[Donora Smog](#)

[Hurricane Agnes 1972](#)

[Ashland 1988](#)

[Glen Alden](#)

[Molly Maguires](#)

[Three Mile Island 1979](#)

[Knox Mine](#)

1. Donora Smog Disaster



Region: Pittsburgh Region

County Location: Washington

Adapted from:

http://en.wikipedia.org/wiki/1948_Donora_smog

<http://www.pollutionissues.com/Co-Ea/Donora-Pennsylvania.html>

<http://www.pollutionissues.com/Co-Ea/Donora-Pennsylvania.html#ixzz1GDsLXmMF>

The Environment and World History, Edited by Edmund Burke III and Kenneth Pomeranz (2009)

Donora Museum www.donora.fire-dept.net/1948smog.htm

http://oceanservice.noaa.gov/education/tutorial_pollution/017references.html

Brief History of Pollution http://oceanservice.noaa.gov/education/tutorial_pollution/02history.html

http://oceanservice.noaa.gov/podcast/supp_jan09.html#eutro

http://www.portal.state.pa.us/portal/server.pt/community/events_that_shaped_our_environment/13894/donora_smog_/588401

Introduction

The **Great Smog of '52** or **Big Smoke** was a severe [air pollution](#) event that affected [London, England](#), during December 1952. A period of cold weather, combined with an [anticyclone](#) and windless conditions, collected airborne pollutants mostly from the use of [coal](#) to form a thick layer of [smog](#) over the city. It endured from Friday 5 to Tuesday, 9 December 1952, and then dispersed quickly after a change of weather.

Although it caused major disruption due to the effect on visibility, and even penetrated indoor areas, it was not thought to be a significant event at the time, with London having experienced many smog events during the past, so called "[pea soupers](#)". During the succeeding weeks however, medical reports estimated that 4,000 had died prematurely and 100,000 more were made ill because of the smog's effects on the human [respiratory tract](#). More recent research suggests that the number of fatalities was considerably greater at about 12,000.

It is considered the worst [air pollution](#) event of the [history of the United Kingdom](#), and the most significant in terms of its effect on environmental research, government regulation, and public awareness of the relationship between air quality and health.^[2] It caused several changes of practice and regulations, including the [Clean Air Act 1956](#). http://en.wikipedia.org/wiki/Great_Smog

Donora Smog Disaster

The smog first rolled into Donora on October 27, 1948. By the following day it was causing coughing and other signs of [respiratory distress](#) for many residents of the community in the Monongahela River valley. Many of the illnesses and deaths were initially attributed to [asthma](#). The smog continued until it rained on October 31, by which time 20 residents of Donora had died and approximately a third to one half of the town's population of 14,000 residents had been sickened. (14,000 residents reported becoming ill and about two dozen deaths were attributed to the badly polluted air).

Read more: [Donora, Pennsylvania - environmental, pollutants, history, industrial, human, health](#)
<http://www.pollutionissues.com/Co-Ea/Donora-Pennsylvania.html#ixzz1GDsLXmMF>

Sixty years later, the incident was described by [The New York Times](#) as "one of the worst [air pollution](#) disasters in the nation's history". Even ten years after the incident, mortality rates in Donora were significantly higher than those in other communities nearby.

[Sulfur dioxide](#) emissions from [U.S. Steel's](#) Donora Zinc Works and its American Steel & Wire plant were frequent occurrences in Donora. What made the 1948 event more severe was a [temperature inversion](#), in which a mass of warm, stagnant air was trapped in the valley, the pollutants in the air mixing with fog to form a thick, yellowish, acrid smog that hung over Donora for five days. The [sulfuric acid](#), [nitrogen dioxide](#), [fluorine](#) and other poisonous gases that usually dispersed into the atmosphere were caught in the inversion and accumulated until the rain ended the weather pattern.

One of the heroes to emerge during the four-day smog was Chief John Volk of the Donora Fire Department and his assistant Russell Davis. Volk and Davis responded to calls from Friday night until Sunday night, depleting their supply of 800 cubic feet (23 m³) of Oxygen, borrowing more from all nearby municipalities including, McKeesport, Monessen, and Charleroi. "I didn't take any myself. What I did every time I came back to the station was have a little shot of whiskey. "

The eight doctors in the town, who belonged to the Donora Medical Association, made house calls much like the firefighters during the period of intense smog, often visiting the houses of patients who were treated by the other doctors in town. This was a result of patients calling every doctor in town in the hope of getting treatment faster. It was not until mid-day Saturday that Mrs. Vernon had it set up so that all calls going to the doctors' offices, would be switched to the emergency center being established in the town hall. The smog was so intense that driving was nearly abandoned; those who chose to continue driving were risky. "I drove on the left side of the street with my head out the window. Steering by scraping the curb." recalls Davis.

It was not until Sunday morning the 31st of October, that a meeting occurred between the operators of the plants, and the town officials. Burgess Chambon requested the plants temporarily cease operations. The

superintendent of the plants, L.J. Westhaver, said the plants already began to shut down operation at around 6am that morning. With the rain alleviating the smog, the plants resumed normal operation the following morning.

Researchers analyzing the event have focused likely blame on pollutants from the zinc plant, whose emissions had killed almost all vegetation within a half-mile radius of the plant. Dr. [Devra L. Davis](#), director of the Center for Environmental Oncology at the [University of Pittsburgh Cancer Institute](#), has pointed to autopsy results showing fluorine levels in victims in the lethal range, as much as 20 times higher than normal. [Fluorine](#) gas generated in the [zinc smelting](#) process became trapped by the stagnant air and was the primary cause of the deaths.

Donora is remembered as a key event that inspired federal air pollution legislation in the 1960s and 1970s and contributed indirectly to the establishment of the U.S. Environmental Protection Agency in 1970. It helped mobilize public sentiment in favor of federal regulation rather than continued state and local jurisdiction over polluters.

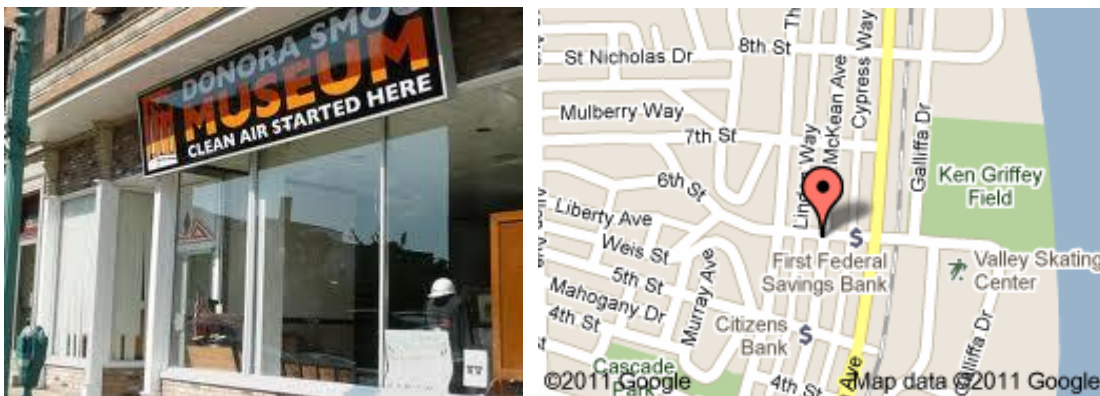
See also:

- [Overview of the 1948 Donora Smog, Pennsylvania Department of Environmental Protection](#)
- [Davis, Devra](#) (2002). *When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution*. New York: Basic Books. ISBN 0-465-01521-2.
- Weather Channel (2008). [When Weather Changed History: Killer Smog](#). Retrieved November 6, 2008.
- Don Hohey (2008). [Museum remembers Donora's deadly 1948 smog: story by Pittsburgh Post-Gazette](#). Rerieved October 21, 2008.
- Hamill, Sean D. ["Unveiling a Museum, a Pennsylvania Town Remembers the Smog That Killed 20"](#), *The New York Times*, November 1, 2008. Accessed November 2, 2008.
- <http://www.pollutionissues.com/Co-Ea/Donora-Pennsylvania.html>

A. Site Visit: the Donora Smog Museum

Region: Pittsburgh Region

County Location: Washington



Donora Smog Museum features a collection of archival materials documenting the [Donora Smog of 1948](#), an [air inversion](#) of [smog](#) containing [fluoride](#) that killed 20 people in [Donora, Pennsylvania, United States](#), a mill town 20 miles south of [Pittsburgh](#) on the [Monongahela River](#).

Donora was home to [U.S. Steel](#)'s Donora Zinc Works and its [American Steel & Wire](#) plant. The event is sometimes credited for initiating the clean-air movement in the United States, whose crowning achievement was the [Clean Air Act](#).

The museum, which opened October 20, 2008, is located at 595 McKean Avenue near Sixth Street in an old storefront.

The museum has partnered with [California University of Pennsylvania](#) to develop a [digital collection](#) of primary sources that are archived on site.

B. Lesson Plan: Air Pollution Tragedy: A Case Study

**Summary of completed lesson plan comparing smog tragedy events at:
<http://www.vcapcd.org/AirTheFilm/pubs/AirPollutionTragedyLessonPlan.pdf>**

Lesson Concepts: Students will build awareness that many disciplines of study and areas of interest can contribute to solving a public problem. Students will build awareness of past air pollution disasters by reviewing historic accounts.

Grade Levels: 9-12

Education and the Environment Initiative Educational Principles and Concepts

Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both. As a basis for understanding this principle:

Concept a. Students need to know that the effects of human activities on natural systems are directly related to the quantities of resources consumed and to the quantity and characteristics of the resulting byproducts.

Concept b. Students need to know that the byproducts of human activity are not readily prevented from entering natural systems and may be beneficial, neutral, or detrimental in their effect.

Link to Air –The Search for One Clean Breath from Executive Producer Barbara L. Page

In the film, we present the air pollution disasters in Donora, Pennsylvania, and in London, England. In Donora, we visit survivors Bill and Gladys Schempp. Bill was on the fire department during that event and literally crawled door-to-door to deliver oxygen to Donora residents. But there is another historical air pollution event we can learn from: the 1930 tragedy in Belgium's Meuse Valley.

Materials

Resource sheets (scenarios for several groups; Doctors, Climatologists; Geologists; Chemists; Industrialists etc)

Advanced Preparation

Make copies of Resource 1 information sheets for student groups.

Time and Student Grouping; One or two 50 minute class periods; students will work in six groups to read, summarize and report on evidence to solve a mystery.

Procedure

1. Inform students they will be engaging in a forensic exercise to determine the cause of death of people in an area of Brussels in the 1930s.
2. Group students into six teams: Medical doctors (two groups); Climatologists; Geologists; Chemists; Industrialists.
Each student group will read and discuss the information sheet provided to them. (See Resource 1 for case studies.)
3. The teacher will lead a class discussion during which time students will report their findings to the class. As information is provided to the class from each group, the teacher or a student chosen by the teacher, will post findings on a chart for all to read.
4. As a group, class will discuss findings and propose solutions to the mystery.

Teacher Background

Since the Industrial Revolution, there have been several occurrences of mass illness and death due to air pollution from factories. While none of these tragedies were intentionally perpetrated, factory owners and government officials were reluctant to place blame on the factories due to concerns about production, profit, and liability. In each case, scientific investigation determined causes based on the combination of chemicals released and their affect on human physiology, geographic, and climatic conditions.

Teacher Tips

The forensic exercise provided is designed to build students' interest in the nature of a catastrophe through role playing one of the many scenarios which could provide information to help solve the puzzle of the mysterious deaths. Information provided to the students is targeted to lead to a quick resolution of facts without involved research.

As groups present their summaries, the teacher should chart the factors most important in solving the problem. Emission of chemical pollution from the factories, chemical changes occurring when the pollution combines with water, symptoms of respiratory problems in autopsies and medical exams, and the nature of the valley experiencing an inversion layer are the evidence the teacher would want to highlight for the students to conclude that emissions from the factories in combination with geography and weather lead to the deaths. Most of the time damage due to pollution is not obvious but that doesn't mean it isn't there.

Discussion of the benefit of employment at the factories can be weighed against the idea of public health concerns. The medical group is presented with information that lung disease is also caused by smoking cigarettes. If the medical group uses this information to offer a solution, the teacher should point out the suddenness of the medical emergency as it relates to the long time period over which people have smoked.

Have copies of Resource 3, Why Should You be Concerned About Air Pollution? available for groups who finish early to read and review.

Closure: Discuss with the class that a cause of a mystery can always be investigated. Scientific investigation will usually involve many disciplines: medical, chemical, geological, industrial, and political. It is important to carefully consider evidence presented for accuracy and thoroughness.

Assessment: Understanding the Meuse Valley tragedy involves input from a number of disciplines and points of view. To assess student understanding of this situation, have them write a persuasive or expository essay to the prompt: You are the mayor of a town which has just experienced an environmental catastrophe. Detail how you will oversee the investigation and what type of tests you would employ to ensure a quality conclusion.

Extension: Students read Air Pollution and Historic Tragedies (Resource 2) and discuss ways in which other tragedies can be prevented.

Homework: Students will read about preventative measures taken to guard against such tragedies. Article entitled Why Should You Be Concerned About Air Pollution? (Resource 3).

Resources: The Journal of Industrial Hygiene and Toxicology, Year 1937, Volume 19, Pages 126-137.
U.S. EPA: <http://www.epa.gov/air/caa/peg/concern.html>.

Related Web Sites:

Kyoto Protocol: http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php.

C. Template for Student “You are There” Simulations/Presentations:

The early days of television witnessed a series entitled “You are there” which television reporters offered “stand-ups” with microphone in hand trying to describe events in real time as they enfolded behind them/ just out of view, periodically grabbing a passing policeman, official, doctor, soldier etc. as they crossed into the reporters view. The following articles, excellent in themselves, provide all the color, character, context, content and setting students would need to offer group or individual presentations on the Donora tragedy.

“You are there” reenactments pursue the same content/assessment opportunities as the lesson plan discussed above, but may require less research writing, and could substitute script/process writing instead, or be used a media-skill building exercise from production to talent to performance/learning assessment from non-participating students who nonetheless are tasked and evaluated as “audience” and/or reviewers.

HISTORIC MARKER COMMEMORATES DONORA SMOG TRAGEDY

http://www.portal.state.pa.us/portal/server.pt/community/events_that_shaped_our_environment/13894/donora_smog_/588401#marker

CLEANER AIR IS LEGACY LEFT BY DONORA'S KILLER 1948 SMOG

<http://www.post-gazette.com/magazine/19981029smog1.asp>

20 DIED. THE GOVERNMENT TOOK HEED.

IN 1948, A KILLER FOG SPURRED AIR CLEANUP

http://www.donorasmog.com/newsarticles_files/article20died.htm

DEADLY SMOG 50 YEARS AGO IN DONORA SPURRED CLEAN AIR MOVEMENT

http://www.donorasmog.com/newsarticles_files/articledeadlysmog.htm from

CNN Interactive

DONORA DISASTER WAS CRUCIBLE FOR CLEAN AIR

http://www.donorasmog.com/newsarticles_files/articledonoradisater.htm

DONORA'S KILLER SMOG NOTED AT 50 http://www.donorasmog.com/newsarticles_files/articledonorakillersmog.htmBy

2. Rachel Carson/Environmental Education

Region: Pittsburgh Region

County Location: Allegheny

Adapted from:

<http://explorepahistory.com/hmarker.php?markerId=529>

<http://www.rachelcarsonhomestead.org/History/tabid/57/Default.aspx>

[RachelCarson.org](http://www.rachelcarson.org), <http://www.rachelcarson.org>.

<http://www.swarthmore.edu/SocSci/Education/Portfolios/rwillem1/RachelCarson.html>

<http://www.lkwdpl.org/wihohio/cars-rac.htm>

<http://teacherlink.ed.usu.edu/tlresources/units/byrnes-famous/carsonra.html>

<http://learningtogive.org/lessons/unit157/lesson1.html>

http://www-tc.pbs.org/wgbh/americanexperience/media/uploads/earthdays_tg_rcarson.pdf

http://switchboard.nrdc.org/blogs/rperks/destroying_dimock_natural_gas.html



Introduction

It is here in southwestern Pennsylvania that this little girl, who grew up to become "one of the most influential people of the 20th century," according to TIME magazine, developed her love of nature. The youngest and only child of three to attend college, Rachel Carson was a published writer by age 10. In addition she began a life-long love of the ocean - perhaps inspired by her daily view of the great Allegheny River. As a young adult, Rachel went on to finish degrees in biology and marine biology.

Her gift for writing and love for nature developed eventually into a literary outlet. She authored three books about the ocean and became a successful writer. Her fourth and perhaps most famous work was *Silent Spring* - a warning about the dangers associated with the indiscriminate use of chemical pesticides and their potentially adverse effect on the environment and human health. Carson promoted the need for more extensive research before releasing chemicals into our environment.-- <http://www.rachelcarsonhomestead.org/>

The Rachel Carson Homestead is the birthplace and first home of ecologist Rachel Carson, whose 1962 book *Silent Spring* launched the modern environmental movement. Born in this five-room farmhouse, Carson's childhood in southwestern Pennsylvania nurtured a love and respect for nature and natural things which would guide her the rest of her life. *Silent Spring* warned of the dangers of indiscriminate pesticide use and is regarded as one of the most important books ever written.

The small structure that would become the Carson family homestead was constructed in approximately 1870, and definitely before 1892. It was one of the earlier buildings in the small Allegheny River town of Springdale, approximately 14 miles upstream from Pittsburgh, a burgeoning center of the industrial revolution at the time. Several outbuildings (outhouses, a barn, a chicken coop, and a springhouse) were added to the property by previous owners before the Carson's arrival.

The Carson Era 1900-1930

The property was purchased by Robert Carson, Rachel's father, on April 2, 1900, for \$11,000. The property included approximately 65 acres at the time it was acquired, including an apple orchard, rolling farmland and wooded areas. The simple house that the Carson's maintained reflected both the period and their economic status.

The house was a two over two plan with end chimneys, a one story lean-to kitchen (added after the original house), and a raised porch across the entire south facade. It was clad in wide clapboard siding with cornerboards and had a wood shingle roof. A grape arbor enveloped the northeast corner. The house had a southern exposure, toward the Allegheny River, and was located on a sloping hillside that was gently graded from front to rear.

Inside, a parlor (living room) and dining room on the first floor were separated by a central staircase that led to two bedrooms on the second floor. The house was electrified at some time during the Carsons' occupation, but had no indoor plumbing, running water, or central heat. Each room was equipped with a small coal stove that supplied heat. Furnishings were simple.

The rudimentary lean-to kitchen featured a gas stove (with a pipe out the back wall) and contained a large wooden table that was always spread with fresh newspapers.

A small cellar was accessible only from the outside steps, and was used as a fruit cellar. The springhouse, set into a hillside approximately 50 feet south of the house, supplied fresh water and served as a primitive refrigeration system. A wood frame garage was added to the site during the Carsons' occupation.

There was a lilac bush near the front porch, a small weeping mulberry, honeysuckle covering the front and west end of the porch, and a large garden containing peas and tomatoes. The Carsons planted pear, birch, and maple trees and wisteria along the front porch.

The apple orchard on the hill above the house became known as "Carson's Grove" and was used by local residents for picnics.

Access to the property was from Colfax Lane (today's Colfax Street), an unpaved dirt road to the west of the house, that was typically rutted from horse and buggy tracks.

The property acreage decreased during their residence as the Carsons sold parcels and in fact laid out a subdivision plan that was presented for approval in 1924. The property had shrunk to approximately 20 acres by this time. The Carsons lived in the house until 1930, when they followed Rachel to Baltimore, Maryland.

The Post-Carson Era 1930-1975

After the Carsons left Springdale in 1930 and followed Rachel to Maryland, the house was rented for several years and vacant for several more following that. Angeline Sober, a local schoolteacher who had in fact taught a young Rachel Carson, purchased the by-then dilapidated house from Robert McLean Carson, Rachel's brother, in 1937.

Ms. Sober subsequently embarked on a renovation and expansion project that included the addition of an east wing, indoor plumbing, rewiring, and a central hot water heating system. After the renovations, Ms. Sober lived primarily in the newer areas of the house and rented most of the historic structure as a separate family residence. While the extensive renovations probably saved the house from demolition, they also significantly affected the character and historic integrity of the house.

As Rachel's career blossomed and she became a well-known writer, Ms. Sober would entertain guests with loving stories of her childhood in Springdale and the roots of her interest in nature. Ms. Sober would remain a life-long fan whose care of the property during these years was crucial to its eventual preservation as a historic site.

Ms. Sober lived in the house until the early 1970's, when she began preparations to enter a retirement home. While a group of interested conservationists, historians, and local citizens expressed interest in preserving the site, developers also had their sights set on acquiring it.

A. Rachel Carson Birthplace

Marker Location: Pittsburgh Street (SR 1001, old PA 28) & Colfax Street in Springdale

Scientist, naturalist and writer. Born 1907 at 613 Marion Avenue; died 1964. Her 1951 book "The Sea Around Us" was followed in 1962 by "Silent Spring." This book focused the nation's attention on the dangers of pesticides and helped launch the environmental movement.



Behind the Marker



Credit: National Oceanic and Atmospheric Administration, U.S. Department of Commerce



On May 17, 1907, Rachel Carson was born in this small, five room farmhouse,
Credit: Photograph courtesy of CCBarr: <http://www.flickr.com/photos/ccbarr>

From her earliest days on the family homestead outside of Springdale, Pennsylvania, Rachel Carson always had two loves: nature and writing. "I can remember no time, even in earliest childhood, when I didn't assume I was going to be a writer," recalled Carson in 1954. "Also, I can remember no time when I wasn't interested in the out-of-doors and the whole world of nature. Those interests, I know, I inherited from my mother and have always shared with her."

Growing up just north of Pittsburgh, Carson spent much of her childhood on the banks of the Allegheny River and under the shade of the trees in her family's orchards. But it was during her second year at the Pennsylvania College for Women that her love of nature started to shape itself into the career for which she became known. After earning a degree in biology, Carson embarked on a career that would lend legitimacy to the cause of environmental and ecological protection.



In this 1955 photograph, a farmer surveys the mound of synthetic fertilizers...
Credit: Image Donated by Corbis-Bettmann

Studying at the Woods Hole Oceanographic Institute in Massachusetts, she developed a love for the sea and

became one of the first two women hired by the U.S. Bureau of Fisheries as a researcher and science writer. Her first brush with fame came in 1941 with publication of *Under the Sea*. The success of her next book, *The Sea Around Us* (1951), provided her financial security and cemented her reputation as both a scientist and a writer.

But it is not for her work with the ocean that Carson is best remembered. By the late 1950s Carson had become concerned about the correlation between insecticide use and the disappearance of songbirds across the nation. Assisted by ornithologists and other scientists, Carson conducted a thorough and systematic investigation that documented the deadly effects of many widely used chemical pesticides.



Rachel Carson exposed the threat to the environment posed by DDT and other synthetic...
Credit: Erich Hartmann/Magnum Photos

Published by Houghton Mifflin in 1962, *Silent Spring* became an instant bestseller. In her clear and eloquent prose, Carson explained how DDT and other synthetic chemicals were killing far more species than they had targeted. Carson documented how the poisons remained in the environment for years, becoming increasingly toxic and eventually impacting not just insects, but also wildlife and humans. "For the first time in history, every human being is now subject to contact with dangerous chemicals from the moment of conception until death," wrote Carson. "In this now universal contamination of the environment, chemicals are the sinister and little recognized partners of radiation in changing the very nature of the world -- the very nature of life itself."

First introduced during World War II, DDT was a cheap and effective insecticide. A potent killer of lice, mosquitoes, and other insects that carried typhus, malaria, and other microscopic human predators, it was considered the "atomic bomb of the insect world." After the war, hundreds of millions of pounds of DDT and other powerful chemical insecticides were sprayed indiscriminately to control mosquitoes, fire ants, and other insects that preyed upon American agriculture. But while chemical manufacturers and farmers were touting the blessings of a world free from pests, Carson warned Americans that each year new synthetic chemicals were being released into the environment "with little or no advance investigation of their effects on soil, water, wildlife or man himself." "The question," Carson asked, "is whether any civilization can wage such relentless war on life without destroying itself, and without losing the right to be called civilized?"

Silent Spring remained atop the New York Times bestseller list for thirty-one weeks. Her detailed and eloquent condemnation of the American pesticide industry had touched a chord. Unable to prevent the publication of her book, the American chemical industry sought to discredit it, claiming that Carson was a hysterical, misguided woman with communist affiliations. Industry scientists attacked her research, accusing her of

"overgeneralizations and downright errors."

But her science was sound. After a Presidential Scientific Advisory Committee appointed by President Kennedy corroborated her findings in 1963, Congress began to pass a series of laws to protect life -- human and non-human -- in America. Today, historians consider *Silent Spring* one of the great books in American history, for it catalyzed the nation and gave birth to the modern environmental movement. Carson would not, however, live to see it. In 1964, at the age of fifty-six, she died of a cancer that had first been diagnosed soon after she began working on *Silent Spring*. As one writer put it, "A few thousand words from Rachel Carson and the world took a new direction."

Beyond the Marker

Linda Lear, *Rachel Carson: Witness for Nature* (New York: Henry Holt & Co., 1997).

Paul Brooks, *The House of Life: Rachel Carson at Work* (Boston, MA: Houghton Mifflin, 2000).

Rachel Carson Lesson Plan:

http://www-tc.pbs.org/wgbh/americanexperience/media/uploads/earthdays_tg_rcarson.pdf

Rachel Carson: Sounding an Environmental Alarm Lesson Plan
Produced by Earth Day Network in association with American Experience
Earth Day Network
1616 P Street NW, Suite 340 ! Washington, DC 20036
(P) 202-518-0044 ! (F) 202-518-8794

www.earthday.net/education ! education@earthday.net

Rachel Carson: Sounding an Environmental Alarm
Produced by Earth Day Network in association with American Experience

INTRODUCTION

In this lesson, students will discover who Rachel Carson was and why she felt compelled to write *Silent Spring* by analyzing the fable in the first chapter of the book. They will examine the impact of this fable, discuss these issues, learn about DDT, and better understand Carson's impact on the environmental movement.

LESSON OVERVIEW

Grade Level & Subject: Grades 5-8: Language Arts and Science

Length: 1-2 class periods

Objectives:

After completing this lesson, students will be able to:

Learn who Rachel Carson was and what motivated her to write *Silent Spring*.

Understand the negative effects of DDT and pesticides.

Analyze and illustrate a fable to identify the purpose of Carson's book and the birth of the modern environmental movement.

3. Environmental Education and Interpretation

The State park System offers these educational experiences:



The DCNR Bureau of State Parks' environmental education program aims to develop a citizenry that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitude, motivations, commitment and skills to work individually and collectively toward solutions of current problems and the prevention of new ones. To achieve these goals, a program of services is offered for the citizens of Pennsylvania and visitors to the state that promotes:

- An understanding that humankind is an inseparable part of the ecosystem and whatever humans do may alter their surroundings.
- A basic knowledge of the natural laws which govern the environment, skills to permit solving environmental problems, and recognition of each individual's responsibility toward finding solutions to environmental problems.
- The development of a stewardship ethic toward the conservation of Pennsylvania's natural, historical and cultural heritage, and the prevention and correction of continued environmental degradation.

Environmental Education Centers

Four environmental education centers offer year-round educational programming.

[Jacobsburg](#)
[Jennings](#)
[Kings Gap](#)
[Nolde Forest](#)

Resources include

[For Schools](#)
[For Teachers](#)
[For the Public](#)
[Calendar of Events](#)
[Earth Day: Spring into Action](#)
[DiscoverE](#)
[ECO Camp](#)
[Parks with Education Programs](#)

For Schools

Student Field Learning Experiences: Outdoor environmental education programs for school groups, called field learning experiences, are available for preschool through grade 12 at four environmental education centers and 20 nine- to 12-month state park sites. Most field learning experiences follow the sequence and continuum outlined in the *Activities For Environmental Learning*, a supplemental curriculum developed by the Pennsylvania Bureau of State Parks. Using this conceptual-based environmental education activity continuum, these activities develop environmental awareness, environmental knowledge and environmental valuing and problem solving skills at the appropriate grade level.

Environmental Forum: Selected students from high schools investigate a local environmental issue through sessions at the state park site and local community sites. Student teams develop projects and take positive environmental action toward the issue in their school and/or community.

Environmental Problem Solving: Groups or classes of middle and high school students use environmental problem solving methods to investigate and take action concerning local environmental issues.

Watershed Education: Students and teachers assess water quality of a local stream on a quarterly basis and develop strategies to solve local water quality problems. Spring and fall Water Quality Seminars are hosted by the environmental education centers to share regional and statewide results and to provide additional water quality information.

Special Populations: The complete array of environmental education services offered is also available for special populations. Special programming is available for groups with physical and mental disabilities. Consultant services for teaching environmental education with special populations is also available at some sites.

For Teachers

In-Service and Pre-Service Workshops: The Bureau of State Parks regularly offers both credit and non-credit in-service courses through local intermediate units. Graduate credits in environmental education are offered through Penn State and Slippery Rock universities. We also provide workshops for individual schools and school districts. Workshops are designed to give educators the knowledge and skills necessary to implement environmental education with their students. Check out our current schedule of [teacher workshops](#) taking place in state parks and environmental education centers.

Curriculum Development: Assistance is available on an "as staff is available" basis to assist schools in developing environmental education curricula and programs.

Site Development: Assistance is available on an "as staff is available" basis to assist schools in planning and implementing school environmental education sites and environmental study areas. We can provide assistance in planning, layout, pre-inventory, design and utilizing and coordinating other resource agency personnel.

For Teachers

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For the Public

DiscoverE: This series of exciting outdoor programs for young people ages 4-17 makes every day an adventure, every state park a new, wondrous experience!

Pennsylvania's natural resources and historic sites are discovered through exciting programs provided by trained educators and interpreters. By combining recreation and education, we hope to motivate children to learn more and return often, leading to a lifetime of outdoor enjoyment and conservation leadership.

Explore [DiscoverE](#)

Community Programs: A wide range of free public programs are offered throughout the year at most sites. Program themes include environmental issues, cultural/historical, natural history and ecology field trips. Special family programs are planned for adults and elementary-aged children. Program brochures are available at most sites.

Interpretive Services: The Bureau of State Parks provides both day and night guided walks, campfire programs, historical programming, interpretive brochures, exhibits and other interpretive services. Explore the [Calendar of Events](#) for information on upcoming programs and events.

ECO Camp: Exploring Careers Outdoors – a week-long residential camp for a cross-section of high school youth from across Pennsylvania, sponsored by the Department of Conservation and Natural Resources (DCNR). Participate in action-packed, hands on activities and recreational adventures in Pennsylvania's state parks and forests that expose youth to conservation, recreation and careers in natural resources. Learn how people make a living working in the outdoors. A highlight of the week is an overnight camping trip in a nearby state park, and information on future employment opportunities will be available upon completion of the week's programs. Key topics and recreational activities will surround the themes of water, land, forests, and wildlife. Youth participating in the camp may have opportunities for continued involvement with agency staff and programs, through potential options such as internships, mentoring programs, job shadowing or return as future camp leaders.

4. Example of Environmental Site Visit: A Local Farmer's Market:

***Hale'iwa Farmers' Market: Hawaii Cacao Festival
Sunday, January 31st, 2010, 9am – 1pm
Volunteering at the Hawaii Cacao Festival
and Interview with Pamela Boyar of the Hale'iwa Farmers' Market***

Every Sunday at the Hale'iwa Farmers' Market over 40 vendors offer a wide variety of the freshest local produce, hand-crafted Hawaii-made merchandise, and delicious treats and eats (Haleiwa Farmers Market). The market invites everyone to buy locally, bring their own shopping bags and aims to be Oahu's first completely green market. Some of their green initiatives include solar-power, recycling, plastic-free, aiming toward zero-waste, and many educational demos. Monthly festivals celebrate seasonal crops, Hawaiian traditions, and holidays. Food vendors use only bio-compostable plates and utensils, which are composted after use. Further, eating locally greatly reduces the carbon footprint of the consumed food and produces positive affects throughout the community. The market also provides a venue for a number of charitable organizations to raise funds, provide invaluable services, and share a vital message with the community (Haleiwa Farmers Market).

On January 31st, 2010 the first annual Hawaiian Cacao Festival took place at the Hale'iwa Farmers' Market. To the question why they choose cacao for the festival, Pamela Boyar, the co-founder of the market, responded: "Because it's one of Hawaii's emerging agricultural industries."

Highlights of the event were the food demonstrations and sampling of delicious creations from Alan Wong's Restaurant, Town Restaurant Chef Ed Kenney and 21 Degrees North Chef John Armstrong. There was a chocolate recipe contest for everyone who created their own recipe with local Hawaiian chocolate. The judges were Vice Speaker Michael Magaoay, radio and TV personality Howard Dicus, freelance food writer Martha Cheng, Cookie-man Wally Amos, and Hawaii chocolatier Melanie Boudar. Alan Wong was invited to the festival because all dishes in his restaurant feature local flavors and locally grown products. He has a close relationship with Hawaii's farmers and agriculture industry. His aim is not only to use local products, but also to bring greater awareness to the public (Welcome to Alan Wong Restaurant). Wally Amos addresses another aspect of sustainability: social responsibility. He made his hobby - baking chocolate chip cookies - into a business and became famous. He uses his wide recognition as a means to draw attention to an important cause: literacy (Wallyamos.com). Of course, his chocolate chip cookies at the Hale'iwa Farmers' Market were made out of local cacao beans.

On 60 different booths, vendors offered delicious chocolate creations including chocolate butter, chocolate salad dressing, chocolate ravioli with lavender infused marscapone, chocolate covered ginger, waiialua chocolate covered espresso beans and you could buy a cacao tree to plant in your yard. In addition there was a lot of education on nutrition as well as various keiki activities, as for example decorating Mr. Cacao Heads, face-painting, and crowning king or queen of the festival in your an artistic crown-creation. Everyone could enjoy the live music as well as Wanda Adams' cookbook singing. The most popular activity, however, were the farm visits to the Dole Hawaii Diversified Agriculture Program Waiialua Estate Cacao orchard. The buses filled up very quickly and already by 10:15am 115 people had signed up. With 5000 visitors on this day, the whole festival was a huge success.

According to Pamela Boyar there were on average 1800 visitors at the farmers market every week before the festival. One week after the cacao festival the number of visitors rose to 2000, and another week later 2900 visitors came to the market. Due to this success, the festival will be repeated annually. Pamela Boyar said that the Hawaii Cacao Festival is the first of more special events to come. "We'll be doing this every year," she said "we've gotten more responses from this one than any other one. It's a winner. How can you go wrong with chocolate?"

The goal of the festival was to make people more aware and to encourage them to increasingly use the product. During the day it was my task to hand out a short survey to the visitors asking about their experience of the cacao festival, how much they learned and if they think that the festival will change their consumer habits. The responses were almost without exception very positive. The people enjoyed the activities, were very interested in the cacao plants and most of them were really excited to see how chocolate is made. The visitors who returned from the tour at the Waialua Estate Cacao Orchards were very enthusiastic. They told me that the cacao trees were so beautiful and colorful. It must have almost seemed like in a fantasy land. They told me enthusiastically how the cacao pods grow on trees and ripen into hues of red and orange. Each pod is full of seeds, which are pulled out and processed into chocolate. Visitors also really liked the sampling of cacao beans from the freshly ripe pods. This market was a fabulous opportunity to learn firsthand how chocolate is grown and harvested.

From my experience at the festival I could tell that the event was successful in making people more aware and in encouraging them to increasingly use the product. People really have seemed to learn a lot. I talked to some of them when they entered the market and a couple of them even asked me what cacao is and told me they knew nothing about it. When they returned from their visit to the festival and especially the chocolate tent, they told me what they learned and how much they liked learning about cacao and, of course, tasting it. They learned how to make chocolate from the raw cacao pod. They also tasted the raw cacao pod and found out that it tastes quite different from the kind of chocolate they knew before. Visitors could see the transformative power of cacao - from colorful pod to delectable taste sensation (Haleiwa Farmers Market). Especially in the chocolate tent, people could discover all of the many benefits of this amazing fruit.

I myself learned a lot about cacao, too, by talking to the vendors and visitors. Cacao has a lot of history with its earliest recorded use dating back to 1100 BC. The first cacao cultivations were made by Maya peoples and, afterwards, by the Aztecs who were engaged in cacao cultivation and chocolate production. They associated chocolate to their goddess of fertility. The trees were discovered in the tropical rainforests in Central and South America. The pods of this tree contain seeds that can be processed into chocolate. The first people known to have made chocolate were the ancient cultures of Mexico and Central America. They mixed ground cacao seeds with various seasonings to make a spicy, frothy drink. Later, the Spanish conquistadors brought the seeds back home to Spain, where new recipes were created. Eventually the drink's popularity spread throughout Europe (Chocolate - All About Chocolate).

However, during the Industrial Revolution the production of chocolate changed significantly due to mass production techniques. A technique for pressing cacao beans was developed to separate the cocoa solids and cocoa butter and this changed the nature of chocolate production quite radically. Prior to this development, chocolate was sold in the form of a crumbly, very high-fat mixture which was hard to use and digest. After the development, consumers could purchase cocoa powder, an inexpensive, easily handled alternative (What is the History of Chocolate?).

Especially with this change in mind, I think it is important to show people that chocolate is more than what you buy in a store nowadays. The industrialization separated the consumer from the production of many products, as this case of cacao shows. Today hardly anyone knows anymore what chocolate is made of, how a cacao pod looks like and what process is evolved in the production until one has the final product that everyone knows. Therefore events such as the cacao festivals are important to bring the consumer again closer to the product. Chocolate is of the world's favorite flavors and therefore I think it is very important that people learn how it grows, looks like, smells, and tastes, especially when you live in or visit a place where cacao is an emerging agricultural industry.

Overall, volunteering at the first annual Hawaiian Cacao Festival at the Hale'iwa Farmers' Market was a great and interesting experience. The cacao festival really enabled you to explore every aspect of chocolate and to

learn firsthand where chocolate comes from. I am looking to the next big event at the Hale'iwas Farmers Market on April 18th, 2010, where I will be volunteering again.

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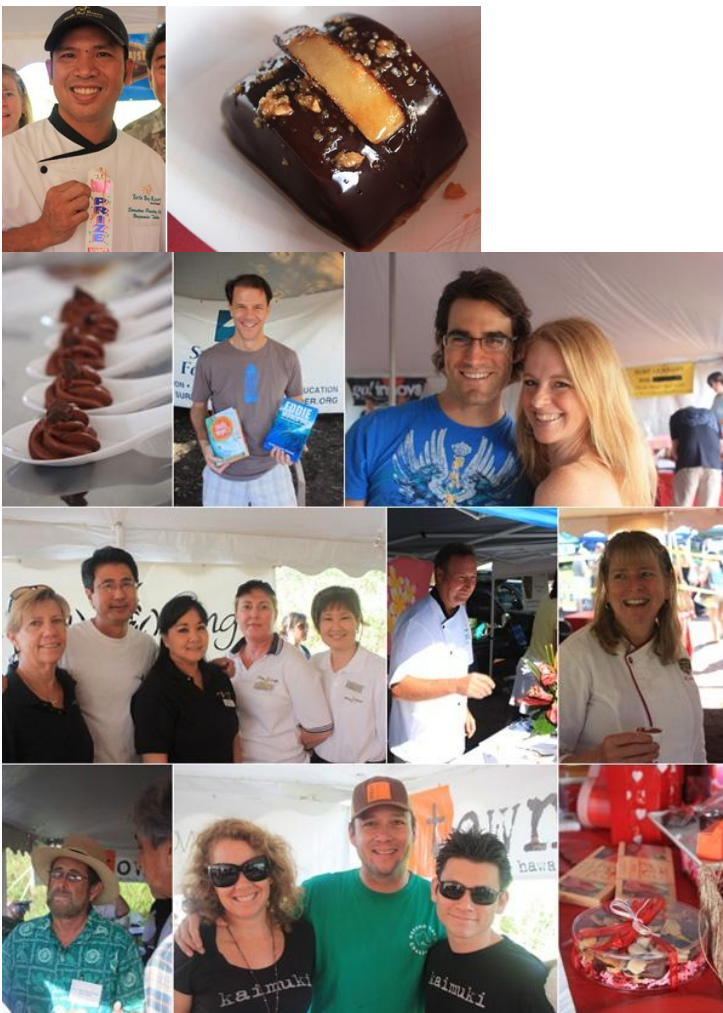
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O. Climate Change

WORLD HISTORY THEME

Climate change has always played a major role in world history, even if humans overlook the origins of the crises they face—such the El Nino-driven drought that, due to laissez faire food distribution policies, created famine in India and China in the late nineteenth century. Climate change in the next 50 years is expected to produce increased atmospheric energy, leading to hotter summers and rain and snowfall in much of the northern and eastern tier of the United States and is expected by some to plunge northern Europe into colder winter weather reminiscent of the Little Ice Age:

“The Little Ice Age brought colder winters to parts of Europe and North America. Farms and villages in the Swiss Alps were destroyed by encroaching glaciers during the mid-17th century. Canals and rivers in Great Britain and the Netherlands were frequently frozen deeply enough to support ice skating and winter festivals. The first River Thames frost fair was in 1607; the last in 1814, although changes to the bridges and the addition of an embankment affected the river flow and depth, hence diminishing the possibility of freezes. The freeze of the Golden Horn and the southern section of the Bosphorus took place in 1622. In 1658, a Swedish army marched across the Great Belt to Denmark to invade Copenhagen. The Baltic Sea froze over, enabling sledge rides from Poland to Sweden, with seasonal inns built on the way. The winter of 1794-1795 was particularly harsh when the French invasion army under Pichegru could march on the frozen rivers of the Netherlands, while the Dutch fleet was fixed in the ice in Den Helder harbour. In the winter of 1780, New York Harbor froze, allowing people to walk from Manhattan to Staten Island. Sea ice surrounding Iceland extended for miles in every direction, closing harbors to shipping”-- http://en.wikipedia.org/wiki/Little_Ice_Age#Northern_hemisphere

World Historians prefer the term climate change to “global warming” in large part because the latter would be merely one aspect, controversial or not, in the larger picture of climate change.

For general lesson plan materials, see;

http://www.ucsusa.org/global_warming/science_and_impacts/impacts/global-warming-materials-for.html

<http://www.usgcrp.gov/usgcrp/education/lessonplans.htm>

<http://www.bing.com/search?q=lesson+plan+activities+union+of+concerned+scientists+climate+change&src=IE-SearchBox&Form=IE8SRC>

For a general introduction to how Pennsylvania addresses these issues, see the opening Message to its Roadmap from Paul King, Chair, PEC Board of Directors (<http://www.pecpa.org/roadmap.htm>), as follows:



PHOTO BY [unreadable]



Challenges often bring opportunities, and this holds true for Pennsylvania and climate change. According to a May 2006 Cleantech Capital Group Report, venture capitalists invested \$1.6 billion in North American clean technology companies in 2005, an increase of 43% from 2004. One overwhelming conclusion of this Report was that governmental policies are a key factor in investment decisions; the authors of the Report concluded: "the seeds are being laid now to determine which state's companies will get the lion's share of investment, and which states will call the leaders of the cleantech industry their own."

In 2005, recognizing the vital role the Commonwealth must play in addressing climate change, the Pennsylvania Environmental Council (PEC) launched the Pennsylvania Climate Change Roadmap project. Working with a diverse group of stakeholders including representatives from energy generation, agriculture, academia, state government, and environmental interests, the Roadmap project had three clear goals: (1) inventory current, and forecast future, greenhouse gas (GHG) emissions in Pennsylvania; (2) present long-term policy recommendations and reduction goals for GHG emissions reduction; and (3) identify near-term strategies to begin our Commonwealth's progress towards those reduction goals.

If we maintain the status quo, Pennsylvania's GHG emissions are projected to grow roughly 10% per decade, through 2025 and beyond. However, Pennsylvania could lower and ultimately reverse this growth by joining other states in setting goals for reducing GHG emissions and adopting the necessary supporting policies. These policies must address every sector of the economy, including transportation, industry, buildings, agriculture, and forestry. In addition, these policies should also be designed to achieve other important goals: energy independence, cleaner air and water, economic development, and job creation.

The Pennsylvania Climate Change Roadmap is a crucial first step in identifying both the challenges and opportunities inherent in climate change. Many of the recommendations contained in the Roadmap will require years of patient effort, focus, and commitment, but they are essential to help ensure that we start off on the right foot toward a sustainable and prosperous future for all Pennsylvanians.

Acknowledgments:

PEC recognizes and appreciates the many individuals who participated as stakeholders and consultants in development of the Pennsylvania Climate Change Roadmap report. Although all stakeholders do not necessarily agree with every statement or conclusion in this report, their views, input, and analysis helped us shape the final recommendations. We benefited enormously from their involvement.

PEC would also like thank the donor organizations that provided the financial support to this project: the Energy Foundation, the Heinz Endowments, and the Emily Hall Tremaine Foundation.

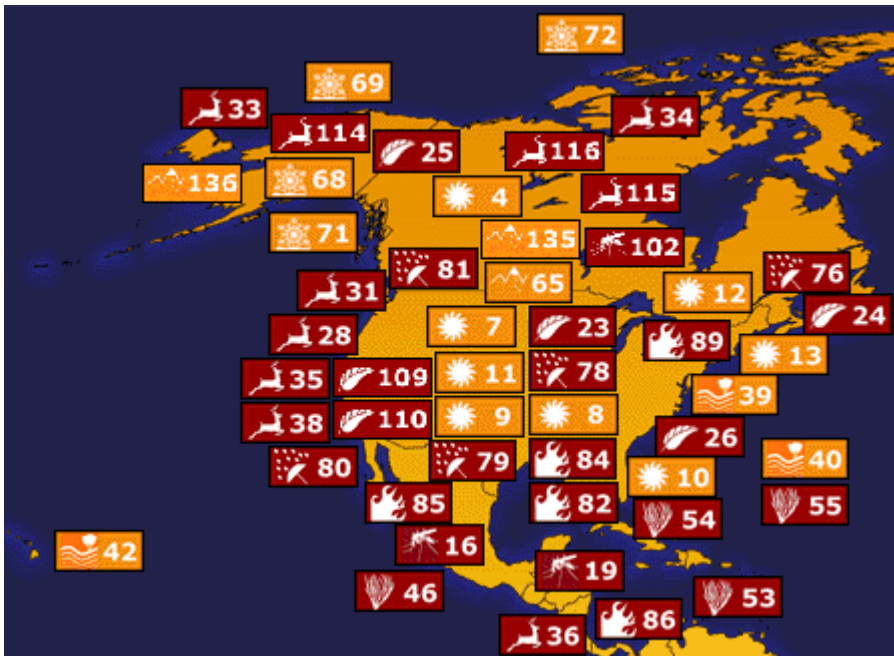
For more information about the Climate Change Roadmap for Pennsylvania, or the Pennsylvania Environmental Council, please contact us at (717) 230-8044.

Students may be assigned to evaluation the elements of the Pennsylvania Roadmap for near and long term effects.

Other students can contact the PEC and ask for contacts with those members/stakeholders who disagree with the PECs Roadmap.

1. The Pennsylvania Environmental Council Addresses the impact of Global Warming Pennsylvania

Click on the numbered icons below for more information.



Adapted From:

<http://www.climatehotmap.org/namerica.html>

http://www.climatechoices.org/assets/documents/climatechoices/climate-change-in-pennsylvania_impacts-and-solutions.pdf

http://www.climatechoices.org/assets/documents/climatechoices/exec-summary_climate-change-in-pennsylvania.pdf

Adapted from:

<http://www.pecpa.org/roadmap.htm>

<http://www.climatehotmap.org/>

<http://www.climatehotmap.org/namerica.html>

Introduction

The vast North American continent ranges from the lush sub-tropical climate of Florida to the frozen ice and tundra of the Arctic. Within these extremes are two wealthy industrialized countries with diverse ecosystems at risk. Yet the United States and Canada are two of the largest global emitters of the greenhouse gases that contribute to a warming climate. Examples of all 10 of the "hotspot" categories can be found in this region, including changes such as polar warming in Alaska, coral reef bleaching in Florida, animal range shifts in California, glaciers melting in Montana, and marsh loss in the Chesapeake Bay.

For North America we have many more hotspots than for some other regions of the world, although impact studies have been emerging in larger numbers in recent years from previously under-studied regions. This higher density of early warning signs in the US and Canada is due in part to the fact that these regions have more readily accessible climatic data and more comprehensive programs to monitor and study environmental change, in part to the disproportionate warming that has been observed over the mid-to-high-latitude continents compared to other regions during the last century, and in part to capture the attention of North Americans who need to take action now to reduce greenhouse gas emissions.

Harbingers

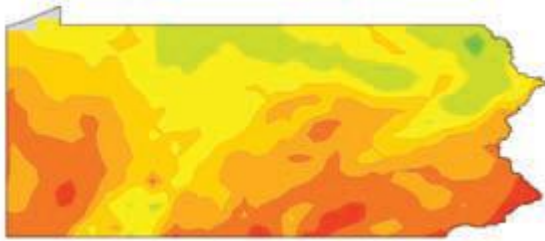
89. Eastern USA -- Driest growing season on record, 1999. The period from April-July 1999 was the driest in 105 years of record-keeping in New Jersey, Delaware, Maryland, and Rhode Island. Agricultural disaster areas were declared in fifteen states, with losses in West Virginia alone expected to exceed \$80 million.

102. North America - Genetic adaptation to global warming in mosquito. Ecologists have identified the first genetic adaptation to global warming in the North American mosquito *Wyeomyia smithii*. Modern mosquitoes wait nine days more than their ancestors did 30 years ago before they begin their winter dormancy, with warmer autumns being the most likely cause. Higher temperatures, enhancing mosquito survival rates, population growth and biting rates, can increase the risk of disease transmission.

State-wide:



1961–1990



2070–2099



0 20 40 60 80 100
Number of Days per Year over 90°F

Temperature to Rise across the State

Statewide, Pennsylvania is projected to experience dramatic increases in the number of extremely hot days over the coming century, especially under the higher-emissions scenario. The greatest warming will be in the southwest and southeast regions, where daytime temperatures by late century (2070–2099) could hover over 90°F for nearly the entire summer.

2. *Union of Concerned Scientists Climate Change Impacts and Solutions for Pennsylvania*

http://www.climatechoices.org/assets/documents/climatechoices/exec-summary_climate-change-in-pennsylvania.pdf

This extensive and well illustrated report addresses virtually every topic of interest on this subject, including possible effects on cities, winters, agriculture etc., all in a fashion accessible for students. Its introduction is as follows.

From colonial times to the founding of the United States and its growth into a global power, Pennsylvania's people and resources have played a leading role in shaping the destiny of our country. Endowed with bountiful forests, fertile soils, extensive coal seams, and navigable rivers, the state created a thriving industrial economy that helped spur the prosperity of a young nation.

For much of the past century, Pennsylvania has worked successfully to diversify its economy as the Rust Belt industries of coal, steel, and manufacturing waned; today the state economy owes at least as much to its service industries and modern manufacturing sectors. Many of its cities, towns, and rural regions, however, have not fully recovered from the decline of these

traditional industries. Climate change will only add to the state's economic challenges while also dramatically altering many aspects of its economy, character, and quality of life.

Global warming is already making a mark on the landscape, livelihoods, and traditions of Pennsylvania, and over the coming decades the impacts are expected to grow more substantial across the state. They may include longer and more intense summer heat waves, reduced winter snowpack, northward shifts in the ranges of valued plant and animal species, and declining yields of key agricultural crops. Some further global warming is unavoidable because emissions of heat-trapping gases such as carbon dioxide (CO₂) can persist in the atmosphere for decades or centuries. CO₂ acts like a blanket, trapping heat and keeping the earth warm.

But the magnitude of warming that occurs later this century depends largely on energy and land-use choices made within the next few years in the state, the nation, and the world. Because humans are largely responsible for current global warming, changing our actions can limit the severity and extent of impacts and thus the degree to which we will need to adapt. Many striking differences in the scale of climate change impacts can be expected, depending on whether the world follows a higher- or lower-emissions pathway. The first (the higher emissions scenario) is a future in which societies—individuals, communities, businesses, states, and nations—allow emissions to continue growing rapidly; the second (the lower-emissions scenario) is one in which societies choose to rely less on fossil fuels and instead adopt more resource-efficient technologies. These scenarios represent markedly different emissions choices that people may make.

The stakes for Pennsylvania's quality of life, and its very character, are great. If we follow the higher-emissions pathway, during the lifetime of today's kindergartener:

- Many Pennsylvania cities can expect dramatic increases in the number of summer days over 90°F, putting vulnerable populations at greater risk of heat-related health effects and curtailing outdoor activity for many individuals.
- Heat could cause air quality to deteriorate substantially, exacerbating allergies, asthma, and other respiratory diseases.

Temperature to Rise across the State: Statewide, Pennsylvania is projected to experience dramatic increases in the number of extremely hot days over the coming century, especially under the higher-emissions scenario. The greatest warming will be in the southwest and southeast regions, where daytime temperatures by late century (2070–2099) could hover over 90°F for nearly the entire summer.

- Heat stress on dairy cattle may cause declines in milk production.
- Yields of native Concord grapes, sweet corn, and favorite apple varieties may decrease considerably as temperatures rise and pest pressures grow more severe.
- Snowmobiling conditions are expected to disappear from the state as winter snow cover shrinks.
- Widespread ski resort closures can be expected, despite increased snowmaking, as winters become too warm for snow—natural or human-made.
- Climate conditions suitable for prized hardwood tree species such as black cherry, sugar maple, and American beech are projected to decline or even vanish from the state.
- Substantial changes in bird life are expected, including loss of preferred habitat for many resident and migratory species.

If Pennsylvania and the rest of the world take action to dramatically reduce emissions consistent with—or even below—the lower-emissions scenario described in this report, many of the consequences noted above may be avoided, limited in scope, or postponed until late century, thereby giving society time to adapt. However, as many of the impacts are now unavoidable, some adaptation will be essential.

Pennsylvania has already shown its willingness to act. It has reduced heat-trapping emissions by driving investment in energy efficiency, renewable energy technology, and alternative transportation fuels; it has embraced wind power and other clean energy options (not only for energy generation but also for economic development); and it has moved to the forefront among “green power” purchasers.

But there are many more measures—based on proven strategies and available policies—that the state and its local governments, businesses, public institutions, and individual households can apply to this challenge. They require only the will to do so.

3. Union of Concerned Scientists Climate Change Lesson Plan

About the Curriculum Guide

This set of teaching materials is designed to accompany *Global Warming: Early Warning Signs* - a science-based world map depicting the local and regional consequences of global climate change. The map was produced as a collaborative project by several environmental organizations, and has been peer-reviewed by scientists.

The Union of Concerned Scientists produced this Curriculum Guide. Geared towards students and teachers in grades 9-12, individual exercises are adaptable to different grade levels. Each activity is structured to include an initial Engagement exercise, one or more steps of a Student Exploration project, and further ideas for extended study. The materials align with National Learning Standards for Science, Geography, Social Studies, Language Arts, Environmental Education, and Technology.

The map -- an exciting visual tool for learning about the impacts of global climate change -- highlights recent events around the world in two broad categories: direct indicators of the observed long-term global warming trend (fingerprints), and events that are consistent with the projections for global climate change and are likely to become more frequent and widespread with continued warming (harbingers).

The Curriculum Guide activities engage students in an exploration of the impacts of global climate change on ecosystems and natural resources, on community, and on individuals and society. The first two activities look at the questions What do we mean by global climate change? and How does the record of climate compare at local versus global scales? Later activities address the impacts of climate change on natural ecosystems, human health, and economy and personal lifestyle.

A Description of the Activities

- **Activity 1:** Climate Change in My City. Students use an historical climate index to analyze climate change at local, regional, and global scales.
- **Activity 2:** Oral History Project: Climate Change Then and Now. Students interview older residents in the community about climate changes during their lifetime and compare the results to a climate change index that is based on historical temperature measurements.
- **Activity 3:** Climate Change and Disease. Students research the relationship between hosts, parasites, and vectors for common vector-borne diseases and evaluate how climate change could affect the spread of disease.
- **Activity 4:** Climate Change and Ecosystems. Students research the interdependencies among plants and animals in an ecosystem and explore how climate change might affect those interdependencies and the ecosystem as a whole.

Download the [Early Warning Signs Curriculum Guide](#).

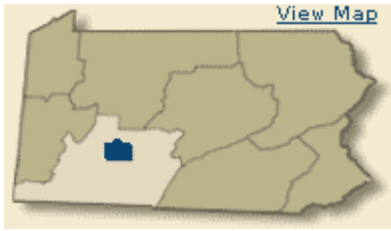
Contact Us!

Feedback on the map and teaching materials is welcome. We are also happy to answer your questions about the Curriculum Guide or to help if you have a problem downloading the documents. Please send your comments, questions, and/or requests for assistance to Jason Mathers at ssi@ucsusa.org.

About the Global Impacts Map

Global Warming: Early Warning Signs can be viewed on the web at <http://www.climatehotmap.org>. The Web site also includes the complete list of scientific references for the events highlighted on the map. Additional copies of the 24 by 36 color poster can be ordered from the web site. (There is a shipping fee.)

B. The Great Johnstown Flood of 1889



Museum Location:

Region: Laurel Highlands/Southern Alleghenies

County Location: Cambria

Marker Location: Junction US 219 & PA 869, 1 mile South of South Fork

733 Lake Road
South Fork, PA 15956
Phone
Visitor Center
(814) 495-4643
Fax
(814) 495-7463

Free Student-Group Admissions Available
Call (814) 539-1889 ext. 305 for details

Adapted from:

Johnstown Flood National Memorial
<http://www.nps.gov/jofl/index.htm>
<http://www.jaha.org/FloodMuseum/history.html>
<http://www.jaha.org/edu/index.html>



Introduction

Climate models suggest more violent rain and snowstorms over Western Pennsylvania. This National Park commemorates the site of one of the worst disasters in United States history, a flood arising from a sudden powerful storm in which over 2200 people and an entire town perished. Nearby, the [Johnstown Flood Museum](#) tells even more of the story through exhibits, artifacts, photographs, and an award winning film. The breast of South Fork Dam which broke the night of May 31, 1889, to cause the historic flood is a short distance away. The remains of the dam can be observed.

There was no larger news story in the latter nineteenth century, after the assassination of Abraham Lincoln. The story of the Johnstown Flood has everything to interest the modern mind: a wealthy resort, an intense storm, an unfortunate failure of a dam, the destruction of a working class city and an inspiring relief effort.

The Johnstown Flood National Memorial has many cultural resources within its boundary. The historic clubhouse of the South Fork Fishing and Hunting Club and a few remaining cottages line Main Street in St Michael, PA. The remnants of the South Fork Dam and the restored Unger House all are important in the story of the Great Johnstown Flood of 1889. The park has a visitor center, exhibits, and a wonderful film entitled "Black Friday".

The Sites and the Themes

Recipe for Disaster [For teacher's guide and much more, click on]

<http://www.jaha.org/edu/flood/why/index.html>

Emphasis: Geography, Earth and Physical Science, Environment, Civics, Economics, Social Studies

Hard as it is to believe today, no successful lawsuits were brought against the owners of the dam that unleashed destruction on the Conemaugh Valley. After the dam had held for decades with only minor problems, why did it fail so colossally on May 31, 1889? Why was the Conemaugh Valley vulnerable to flooding? What other factors contributed to the destructiveness of the Johnstown Flood? In this thread, students will investigate these big questions by digging into the evidence to seek answers for a multitude of other questions that overlap geology, meteorology, engineering, communication and transportation technologies, as well as history, geography, and economics disciplines within the social studies.

Telling the Story [For teacher's guide and much more, click on]

<http://www.jaha.org/edu/flood/story/index.html>

Emphasis: Language Arts, Visual Arts, Music, Performing Arts, Character Education

The Johnstown Flood of 1889 was the biggest news story of the 1800s' last quarter century. Reporters, photographers, and artists flocked to what used to be Johnstown to meet the challenge of describing the indescribable for newspapers, magazines, and books around the world. Just as today, not all publications were equally reliable. Students will read and compare a variety of accounts, from straightforward survivor stories and official reports to sensationalist tabloids.

By reading and interpreting these stories and telling their own, students will learn to read more critically, considering how audience and purpose effect the telling of a story and how different media are suited to telling

different aspects of a story. They will explore such concepts as fact and fiction and such ethical issues as exploitation, fact-checking, and sensationalism.

Rebuild or Move on? [For teacher's guide and much more, click on]

<http://www.jaha.org/edu/flood/rebuild/index.html>

Emphasis: Social Studies, Civics, Economics, Character Education, Visual Arts (architecture)

After witnessing the destruction at Johnstown and surrounding communities, it is a wonder that everyone didn't abandon the ravaged Conemaugh Valley. The enormity of personal and financial loss makes rebuilding even more unimaginable.

The decision to rebuild or move on was a personal, as well as a community, decision. Many individuals, having lost every family and physical tie to Johnstown, did move on. The majority of flood survivors did stay in the Valley. Incredibly, by 1910, Johnstown's population had more than doubled since 1889. It is an inspirational story any time, but it is especially so at a time when western Pennsylvania is trying to rebuild after its economic base was destroyed, and as New Orleans rebuilds in the wake of Hurricane Katrina.

Johnstown Heritage Discovery Center: Through Immigrants' Eyes

The Push and Pull of Immigration [For teacher's guide and much more, click on]

http://www.jaha.org/edu/discovery_center/push-pull/index.html

Emphasis: Social Studies, Economics, History, Geography, Character Education, Multicultural and Ethnic Studies, Mathematics (statistics and graphs)

Historians use the words "push" and "pull" when they study migration. Something "pushes" migrants away from their original homes; something causes them to leave. The other side of the immigration equation is "pull": immigrants decide where to move. Something "pulls" them to their new home. This thread explores the push-pull engine that drives immigration and the American Dream that fuels it.

Making a Life: Creating a Community [For teacher's guide and much more, click on]

http://www.jaha.org/edu/discovery_center/community/index.html

Emphasis: Social Studies, Language Arts, Arts, Folk life, Multicultural and Ethnic Studies, Character Education, Journalism

New immigrants making the adjustment to their new American communities sought refuge in communities of their own -- churches, synagogues, and social clubs where they could speak their own language and practice their own traditions. As generations passed, the ethnic communities became absorbed into the larger community, but sharp-eyed historian-detectives can learn how to decipher clues of their past importance on the streets of Johnstown.

Making a Living [For teacher's guide and much more, click on]

http://www.jaha.org/edu/discovery_center/work/index.html

Emphasis: Social Studies, Economics, Character Education, Multicultural and Ethnic Studies, Career Education

Putting food on the table is at the root of most immigrants' reasons for leaving home and settling in a new place. Little of their old life prepared former peasants for the work they would do in America! Noisy, filthy mills and mines ran around the clock, never stopping for nightfall or holidays. Eventually, they learned to organize to negotiate with the Boss, as the labor movement gained steam.

Wagner-Ritter House [For teacher's guide and much more, click on]

http://www.jaha.org/edu/wagner_house/index.html

Neighborhoods Worlds Apart Launch: 2008

Emphasis: Social Studies, Economics, History, Geography, Multicultural and Ethnic Studies, Mathematics (statistics and graphs), Visual Arts (architecture)

Students will compare social, economic, and architectural aspects of Cambria City and Westmont through census data, historic maps, and architecture. A walking tour of the Wagner-Ritter House's Cambria City neighborhood will build students' historical imagination skills and coach them to read the landscape like cultural geographers.

(Wonder)Women's Work: Real Vs. Ideal Launch: 2008 [For teacher's guide and much more, click on]

http://www.jaha.org/edu/wagner_house/ideal/index.html

Emphasis: Social Studies, Economics, History, Home Economics/Domestic Science, Mathematics (statistics and graphs), Visual Arts (architecture, interior design)

Pressures to be a "Super-Mom" are not new. A century ago, the media -- in the form of advice manuals and advertisements for an explosion of new products and services -- projected ideal views of housekeeping that view real women could live up to. Most working class families couldn't afford new conveniences like electric light, washing machines, and vacuum cleaners. They could barely afford rent and groceries. Learn how women held the family economy together -- a more than full-time job of back-breaking labor.

A Kid's Cambria Launch: 2008: [For teacher's guide and much more, click on]

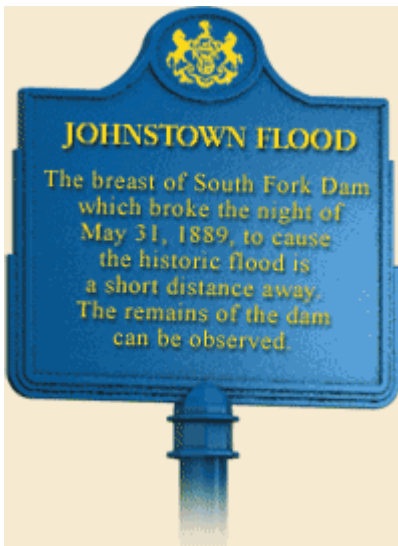
http://www.jaha.org/edu/wagner_house/kids/index.html

Emphasis: Social Studies, Economics, History, Multicultural and Ethnic Studies, Mathematics (statistics and graphs), Folk life

What was it like to be a kid growing up in 1900 at home, work, and play? Some kids didn't have the luxury of "growing up." It was still a time of great infant and childhood mortality, when many children never lived to see their sixth birthdays. Many of those who did make it soon confronted more danger when they went to work in the mines and mills to help families living on the edge of poverty. Schools prepared them for an economic world very different than ours, so most left school after eighth grade, but not until completing a surprisingly rigorous curriculum, which modern students can sample right from the textbooks. Still, kids will be kids, so kids growing up in Cambria City did not neglect having fun! Students will learn how kids occupied themselves before mass media and adult-devised video- and computer-games.

Marker

Marker Location: Junction US 219 & PA 869, 1 mile South of South Fork



Behind the Marker



View of downtown Johnstown Stonycreek River on left of photo. Johnstown sits...
Credit: Courtesy of the Johnstown Area Heritage Association, <http://www.jaha.org/>

It had been raining heavily for two days. The water in the rivers had risen so high that folks began to wonder whether the South Fork Dam would give way, as it had back in 1862. But year after year the dam had held, so the people of Johnstown stopped worrying. Sure, it might give way someday and flood the city with water, but floods were a common occurrence in Johnstown, and the dam would probably not break in their lifetimes.

In the meantime, unbeknownst to the residents below, the directors of the South Fork Fishing and Hunting Club had made modifications to the dam. They had cut its height to permit two lanes of traffic across the top and added barriers in the overflows that would prevent fish from spilling into the river below. The barriers also caught debris and undermined its ability to contain the water rising above its peak. Repaired back in 1879, the year that the directors had purchased the reservoir and land along its shore for wealthy Pittsburgh families seeking a summer retreat, the dam had a four-foot bulge in the middle. It also lacked discharge pipes at the base of the dam that would permit its owners to drain water from the reservoir.

On the morning of May 31, 1889, after a night of heavy rainfall, club president Elias Unger was alarmed to find that the water level of the lake had risen more than two feet since the previous evening. As the waters continued

to rise, Unger ordered last-ditch efforts to prevent the lake from overflowing and dispatched a member to the nearest town to telegraph a warning to Johnstown. Immigrant laborers toiled through most part of the day, first to increase the height of the dam, and then to dig spillways and remove the obstructions in the overflows.

At approximately 3:00 p.m. on May 31, 1889, the South Fork Dam gave way. In less than forty-five minutes, twenty million tons of water poured into the valley below. Roaring down the narrow path of the Little Conemaugh River, a seventy-foot wall of water, filled with huge chunks of dam, boulders and whole trees, smashed into the small town of Mineral Point and swept away all traces of its existence. Next in line was Woodvale, a town of about 1,000, that the torrent smashed with equal ferocity. Scouring its way towards Johnstown, the flood picked up several hundred boxcars, a dozen locomotives, more than 100 houses and a growing number of corpses.

The residents of Johnstown heard the speeding wall of death, a roar like thunder. Next they saw the dark cloud and mist and spray that preceded it, and were assaulted by a wind that blew down small buildings. Next came the great wall of water sixty-three feet high that smashed into the city, "crushing houses like eggshells" and snapping trees like toothpicks. It was all over in ten minutes. But there was more yet to come. The flood met its first serious resistance at the Pennsylvania Railroad's Stone Bridge, which saved the lives of thousands by not breaking. After dark, however, the thirty acres of debris, at places forty feet high, that had piled up behind the bridge caught on fire and burned through the night, blanketing the ravaged town in a dark cloud of acrid smoke.

Even as the waters were receding, hundreds of journalists descended upon the city to report on the deadliest natural disaster in the nation's history. When the count was completed, they would report that the flood had killed 2,209 people and leveled four acres of downtown Johnstown. The reporters wrote wrenching stories of tragedy and heroism, accompanied by photographs and illustrations of the horrific damage. To help the thousands displaced by the flood, people from across the country sent money, clothing and food. Clara Barton and the recently formed American Red Cross arrived to provide medical assistance and emergency shelter and supplies. Several of the club members, including Andrew Carnegie and Henry Clay Frick, also supported the relief and rebuilding efforts with donations.

In the weeks and months that followed, the city gradually rebuilt. The Cambria Iron Works, Johnstown's major industry and employer, reopened just days after the devastating event. With the rebuilding also came questions about why the South Fork Dam collapsed - and who was to blame. "I hold in my possession today..." engineer John Fulton told a large gathering soon after the flood, "my own report made years ago [1880], in which I told these people... that their dam was dangerous. I told them that the dam would break sometime and cause just such a disaster as this."



Wreckage from the 1889 Flood. The building in the background is the Cambria...
Credit: Courtesy of the Johnstown Area Heritage Association, <http://www.jaha.org/>

In the months that followed, newspaper editors, engineers, lawyers, pundits and politicians all weighed in on the causes of the tragedy. To the residents of Johnstown and many people across the nation, blame lay clearly with Andrew Carnegie, Henry Clay Frick and the other wealthy and prominent Pittsburgh businessmen who as members of the South Fork Fishing and Hunting Club owned the dam, and thus were responsible for its collapse. "Fifty thousand lives," wrote Harrisburg newspaperman J. J. McLaurin, "in Pennsylvania were jeopardized for eight years that a club of rich pleasure seekers might fish and sail and revel in luxurious ease during the heated term." Concluding that dam repair and inspection had been botched by wealthy amateurs, engineers, too, weighed in against the club members. In the damage suits filed against members of the club for their negligence, the courts, however, concluded that the collapse of the dam was an "act of God." No court awarded compensation to any victims of the flood.

In the August 1889 issue of the *North American Review*, Major John Wesley Powell, director of the U.S. Geological Survey, offered his own assessment of the lessons to be learned from Johnstown. Observing that the dam had never been "properly related to natural conditions," Powell concluded that "[m]odern industries are handling the forces of nature on a stupendous scale Woe to the people who trust these powers to the hands of fools."

Continuing to rely on the moral character and expertise of property owners - despite the tragedy at Johnstown - Pennsylvania took no action to provide for state inspection of privately owned dams. The Commonwealth did not pass the first state dam-inspection law until 1913, two years after the collapse of the Bayliss Dam had flooded the town of Austin and killed seventy-eight people.

Book: Anwei Law, *The Great Flood* (Johnstown, PA: Johnstown Area Heritage Association, National Park Service, 1997)

David McCullough, *The Johnstown Flood* (New York: Simon and Schuster, 1968)

Johnstown Flood Museum, <http://www.jaha.org/>.

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P. “Firsts” in World History: Using an “Innovations” Exhibit Approach at the Senator John Heinz Regional History Museum to Teach World History



[John Heinz History Center](#), 1212 Smallman St, Pittsburgh

(412) 454-6000, [Directions](#)

WORLD HISTORY THEME

Popular history seems to dwell on “famous firsts” not the least because such things showers credit on the civilization, nationality, ethnicity and other identities of those who most treasure this approach. World historians, however, generally seek to downplay the role of “firsts” in favor of role or impact these achievements have in world historical process. In other words, who first discovered an invention or concept in the past matters less in world history if that knowledge died with the discover (such as the discovery of the Americas by the Vikings in Newfoundland) as it less serves as an engine for change over time, which is a major concern of world historians. “Firsts” are hardly irrelevant, but are often most relevant as they are generated to serve political ends, when they can become dangerous.

Students can very profitably explore this issue—and world history generally—at a current exhibit at the John Heinz History Center entitled “Pittsburgh: A Century of Innovation.” The exhibit is wonderfully summarized

and lavishly illustrated in the center's journal, *Western Pennsylvania History*, vol. 92, no. 1 (Spring), 2009 and presented via a video record (<http://heinzhistorycenter.org/exhibits.aspx?ExhibitID=3>).

What is most intriguing about the exhibit is how many "firsts" may have emerged as ideas in the region, but became global forces in other hands, such as the "Jeep," and the image of "Rosie the Riveter," both designed in Pittsburgh, but produced and took on their famous names elsewhere. On the other hand, the term first "Big Mac" was developed at a local franchise of McDonald's and may never have otherwise existed.

The Senator John Heinz History Center, an affiliate of the [Smithsonian Institution](#), is the largest history museum in the Commonwealth of Pennsylvania. Named after the late U.S. Senator H. John Heinz III (1938–1991), it is located in the [Strip District](#) of Pittsburgh, Pennsylvania, United States.

The Heinz History Center is a 275,000-square-foot (25,500 m²) educational institution "that engages and inspires a diverse audience with links to the past, understanding in the present, and guidance for the future by preserving regional history and presenting the American experience with a Western Pennsylvania connection".

Pittsburgh: A Tradition of Innovation, celebrates southwestern Pennsylvania's "incredible impact on the world."

The Center describes the exhibition as follows:

The two-story, 16,000 square-foot exhibit features more than 50 hands-on activities and audio-visual displays, to help tell Pittsburgh's definitive story.

Beginning 16,000 years ago at Meadowcroft Rockshelter in Avella, Pa., through George Washington's first experiences in the French & Indian War, and Lewis & Clark's groundbreaking expedition, ***Pittsburgh: A Tradition of Innovation*** celebrates our historic accomplishments all the way through our 21st century role as a leader in medicine, higher education, and robotics.

Visitors will experience history like never before by:

- Coming face-to-face with influential figures of Pittsburgh's historic past, through life-like models of Queen Aliquippa, Andrew Carnegie, and Rosie the Riveter, among others.
- Talking with a "virtual" George Westinghouse and asking more than 200 questions about his many achievements, from the invention of the air brake and alternating current to his rivalry with Thomas Edison.
- Stepping inside Pittsburgh's premier jazz club, the Crawford Grill, and listening to music from some of history's most prominent jazz stars, such as George Benson, Billy Strayhorn, Stanley Turrentine, and Mary Lou Williams.
- Taking a ride on "America's First Superhighway," the Pennsylvania Turnpike, in an interactive area featuring an authentic 1940s Willys-Overland jeep.
- Experiencing a virtual "House of Today," which will provide a sneak peak into future Pittsburgh innovations that will improve our lives over the next 250 years.

- Learning about hundreds of Pittsburgh Innovators that have shaped the world from Jonas Salk's polio vaccine and George Ferris' gigantic revolving wheel to Frank Conrad's first radio station.

Pittsburgh: A Tradition of Innovation, helps bring to life a variety of historical models from Pittsburgh's 250-year history, including:

- A movable model of George Ferris' amazing revolving wheel, showcased as part of the 1893 Columbian Exposition in an effort to eclipse the Eiffel Tower
- A detailed, 1/8-scale model of John Roebling's Monongahela Bridge, the first bridge to successfully use wire cables for support

As a Smithsonian-affiliated museum, the History Center borrowed several items directly from the Smithsonian Institution that showcase the worldwide influence of local innovators, including:

- George Washington's "peace pipe," used in Western Pennsylvania during the outbreak of the French & Indian War
- A model of the Fort Pitt Foundry, the Strip District-based iron foundry that built the world's largest cannon
- Several items from the Westinghouse Company, including an original transmitter from KDKA Radio

“America’s shouted, “Yes we can!” Now, Pittsburgh’s saying, “Yes, we did!”” – *Beaver County Times*

Appendix 1: Additional Resources

1. Walking Tour Downtown Pittsburgh for Social Studies Classes

Read more: [Hidden ornamental, monument gems tucked within Pittsburgh - Pittsburgh Tribune-Review](http://www.pittsburghlive.com/x/pittsburghtrib/ae/s_635216.html#ixzz1FM5YAQG8)
http://www.pittsburghlive.com/x/pittsburghtrib/ae/s_635216.html#ixzz1FM5YAQG8Downtown Dragons



<http://www.phlf.org/dragons/home.html>

We're going to explore some **historic** places that are part of Pittsburgh's life today. Learning about these places will help you discover the story of this significant American city that has been growing and changing for more than 250 years.

There is a lot to do on this website. Click on these buttons to see what's here.

[Timeline](#) - Photos and facts from Pittsburgh's history (Still under construction)

[Tour](#) - Featuring 25 significant Pittsburgh places

[Games](#) - Create your own gargoyle, test your knowledge about Pittsburgh, solve a word search puzzle, and more

[Songs](#) - Learn two Pittsburgh songs and hear some students sing them.

[Teachers](#) - Download these Pittsburgh Resources and find out about the actual Downtown Dragons walking tour

[Who We Are](#) - Learn more about the Pittsburgh History & Landmarks Foundation

Resources to Download

[Pittsburgh Trivia Cards](#)

Test your knowledge with 102 multiple choice questions

[Pittsburgh Trivia Cards Answer Sheet](#)

[Portable Pittsburgh Timeline](#)

Work with your students to add photos and facts to this poster with 3 timelines: one for your family, one for your community, and one for your city.

[The Story of Pittsburgh](#)

A play for students, complete with a script and suggestions for building some of the city

[Accompanying Map](#)

[Founding of Pittsburgh](#)

View and download three fact sheets with information and photos on William Pitt, the City Seal, and the naming of Pittsburgh.

[Map of Pittsburgh's 3 Rivers and Eastern US](#)

[Downtown Pittsburgh Bingo Worksheet](#)

[Downtown Pittsburgh Bingo Answers](#)

[Geometry on Firstside](#)

Find 18 geometry terms in a photo of downtown Pittsburgh

Math Facts (Multiple worksheets)

[Story problems](#), [graphing](#), and [measuring](#) based on facts about 10 downtown landmarks

[Historic Preservation Word Search](#)

Find 21 words in this puzzle

[Station Square Scavenger Hunt](#)

Packed with information on the former P&LE Railroad

[Station Square Scavenger Hunt Answer Sheet](#)

Historic Photographs

[View](#) and [download](#) 19 photos of Pittsburghers from around 1860 to 1992

(Images download in a zip file. Unzip and you will be able to access the higher resolution photos.)

[Urban Survival](#)

A concise Pittsburgh summary, timeline, and description about the Planning Process

[Downtown Dragons Vocabulary](#)

Click here for a list of all the vocabulary words defined on this website

Downtown Walking Tours

—[Grant Street and Mellon Square](#)

—[Penn-Liberty Cultural District](#)

—[Fourth Avenue and PPG Place](#)

—[Fifth & Forbes and Market Square](#)

—[Allegheny River Bridges & More](#)

[8 Downtown Walking Tour Fact & Photo Detail Sheets](#)

Related Websites

[City of Pittsburgh's *City Legacies*](#)

[Frick Art & Historical Center](#)

[Fort Pitt Museum](#)

[Google Maps](#)

[Historic Pittsburgh Website](#)

[Pittsburgh Neighborhood Tours](#)

[Search the *Library of Congress* for other historic Pittsburgh images](#)

[Senator John Heinz Pittsburgh Regional History Center](#)

[Spotlight on Main Street \(South Side\)](#)

Downtown Dragons Walking Tour Information

Booking a Tour

Contact Karen Cahall

Email: karen@phlf.org

Phone: 412-471-5808, ext. 537

Book six months in advance for best choice of dates.

On any one day, we can handle about 60 students at most. Therefore, if your group includes more than 60 people, schedule TWO walking tour dates: one day for the first half of your group and one day for the second half.

Tour objective

To introduce children (and adults) to Pittsburgh, during a two-hour walking tour of downtown Pittsburgh so they understand that Pittsburgh is a significant American city with a rich history full of historic places worth saving that give the city its unique character and identity.

Knowing more about the city builds pride and encourages people of all ages to become involved in making the city a better place and respecting its architectural heritage.

The Downtown Dragons tour builds on Social Studies units about Pittsburgh, promotes citizenship skills, and teaches life skills.

Connections to Academic Standards

[2006 Teacher/Chaperone Evaluation Form](#)

Read the comments of 36 adults

[Student Thank You Notes](#)

See what 10 students said and drew

Night of the Gargoyles, by Eve Bunting

[Click here](#) to see a book that you can borrow from Landmarks.

Contact Karen Cahall at karen@phlf.org

Tour Details

Appropriate for: Students in grades 3 through 8 (although college students and adults enjoy the tour too).

Walking tour time: 2 hours approximately. Tours are offered Monday through Saturday and usually begin between 9:30 a.m. and 10:00 a.m., depending on the group's preference.

Meeting and ending location: Station Square (near the Smithfield Street Bridge entrance to the Shops).

Group size: 10 to 15 students per group.

Chaperones required: 1 adult per every 5 students. Chaperones are free.

Tour fee: \$4.00 per student. NOTE: If your school or group is a member of Landmarks, then the fee is \$2.00 per person. It is worth joining Landmarks!

IN ADDITION: EACH participant (student AND adult) must bring exact change to pay for the T ride from downtown Pittsburgh back to Station Square. The fee is 75 cents per child age 6 to 11 and \$1.50 for anyone age 12 or older.

2. Additional Site visit Locales

[Hands on History - 10 Must See Historic Sites Near Pittsburgh](#)

Experience history up close and personal at these must visit historic sites in Western Pennsylvania. All are located within a few hours drive from Pittsburgh.

[Allegheny Cemetery](#)

Allegheny Cemetery is one of the oldest and largest cemeteries in the country with 300 acres and 15 miles of paved roadways. Approximately 120,000 dead are interred there, including many of Pittsburgh's most notable figures.

[Allegheny Portage Railroad](#)

This National Historic Park commemorates the first railroad constructed over the Allegheny Mountains, an inclined plane railroad considered an engineering marvel in its day.

[Carnegie Libraries: The Future Made Bright](#)

<http://www.nps.gov/nr/twhp/wwwlps/lessons/50carnegie/50carnegie.htm>

[Compass Inn Museum](#)

Located three miles east of Ligonier on Route 30, this restored 1799 stage coach stop offers guided tours. Features a stagecoach furnished with period pieces, cookhouse with beehive oven, the blacksmith shop with working forge, and barn housing a stagecoach and Conestoga wagon.

[Covered Bridges of Pennsylvania](#)

Explore the covered bridges of Pennsylvania, birthplace of the covered bridge and home to over 200 covered bridges that are still standing.

[David Bradford House](#)

Learn about the famed Whisky Rebellion at this 18th century home of David Bradford, a prominent attorney and leader in the rebellion. David Bradford and his family lived in this Washington County house -- a mansion by frontier standards -- from 1788 to 1794.

[Drake Well Museum & Park](#)

The full-size replica of Edwin Drake's first successful oil well, museum, and other exhibits tell the story of Sir Edwin Drake and the oil boomtown of Titusville, PA. The nearby Oil Creek & Titusville Railroad runs passengers along scenic Oil Creek, while guides tell the tale of the birth of America's modern oil industry in the rolling hills of western Pennsylvania.

[Duquesne Incline](#)

Take a step back in time on an elegant, century-old cable car and see one of the best views of downtown Pittsburgh while riding one of the few remaining inclines in the country. Also known as a funicular, the incline was built in the late 1800s to transport immigrant workers from work at plants along Pittsburgh's rivers to their homes above. Don't miss the Pittsburgh history museum at the top!

[Fallingwater & Kentuck Knob](#)

One of the world's most significant architectural structures, Fallingwater is the only remaining great Frank Lloyd Wright house with its setting, original furnishings and artwork intact. Nearby, [Kentuck Knob](#) is another amazing example of Wright's architectural genius.

[Fort Ligonier](#)

Originally constructed in 1758, this historic fort in Westmoreland County was an important staging ground in the French & Indian War. The museum and exhibits tell the story of the war and the realities of frontier life in southwestern Pennsylvania. Open May through October.

[Fort Necessity National Battlefield](#)

Fort Necessity National Battlefield was the site of the opening salvo in the war that eventually became known as the French & Indian War or Seven Year's War. Find hours, directions and visitor's tips for Fort Necessity in Western Pennsylvania.

[Friendship Hill National Historic Site](#)

Visit the restored country estate of Albert Gallatin, a Swiss emigrant best remembered for his thirteen year tenure as Secretary of the Treasury during the Jefferson and Madison administrations.

[Historic Harmony](#)

This National Historic Landmark town, near Pittsburgh, Pennsylvania, showcases exhibits from Native American, Harmonist and Mennonite cultures. At the Harmony Museum see how Harmonists and Mennonites lived, tour the wine cellar and learn about the French and Indian War.

[LeMoyne House](#)

Pennsylvania's first National Historic Landmark of the Underground Railroad, LeMoyne House is one of only seven such sites in the United States. The stately stone house in Washington County is open for tours.

[McConnell's Mill State Park](#)

Tours of the restored rolling gristmill and covered bridge at McConnell's Mill state park are only part of the adventure. There is also striking scenery, gorgeous hiking trails, whitewater boating and two rock climbing and rappelling areas.

[Meadowcroft Museum of Rural Life](#)

This wonderful, off-the-beaten-path destination recreates the story of life in Western Pennsylvania over the past 16,000 years. Explore a charming 19th century village or the internationally-known archaeological dig at the Meadowcroft Rockshelter, where the first Americans lived over 16,000 years ago.

[Nemacolin Castle](#)

This tudor style house with octagonal tower and battlements has 22 furnished rooms showing the stages of change from trading post to castle. Learn about tours and upcoming events.

[Old Bedford Village](#)

This Bedford County living history museum and Native American settlement helps visitors experience what pioneer life was like in 18th and 19th century Pennsylvania. Tour the log cabins and exhibits, or enjoy military and civilian re-enactments, colonial craft demonstrations and classes, and festivals.

[Old Economy Village](#)

This six-acre National Historic Landmark in Ambridge, PA, is the restored 19th century home of the Harmonists, a communal Christian society led to Pennsylvania from Germany by George Rapp in search of religious, social and economic freedom. Restored buildings and more than 16,000 preserved artifacts tell their story.

[Oliver Miller Homestead](#)

This old stone farmhouse, nestled among the trees at South Park in Allegheny County, is a pioneer landmark and Whiskey Rebellion site.

[Pennsylvania Trolley Museum](#)

Just 30 minutes south of Pittsburgh, you can climb aboard a restored streetcar and head out for a scenic 4-mile ride into the past. Almost 50 historic trolleys from various eras are on display in the museum.

[Senator John Heinz Pittsburgh Regional History Center](#)

Located in the Strip District, the John Heinz History Center brings 250 years of Western Pennsylvania to life. Step inside a 1790s log cabin. Discover how immigrants shaped this region. Uncover the myths of the Underground Railroad and climb aboard a 1940s Pittsburgh trolley. There's plenty here for young kids too, including *Discovery Place* with special hands-on history exhibits and games.

[The Pennsylvania Lumber Museum](#)

Experience the lumberjack lifestyle of yore. Take a tour of the grounds and view the rugged lifestyle of the woodhicks in the re-created logging camp. Every summer, at the annual Bark Peeler's Convention, present-day woodsmen compete in old-fashioned games that test woodcutting strength and skill. Potter County, PA.

[Western Pennsylvania Sports Museum](#)

This interactive 20,000 square-foot exhibit, located in the John Heinz Pittsburgh Regional History Center, celebrates the rich sports legends and traditions of Western Pennsylvania. Explore interactive kiosks and exhibits, watch historic videos, and view historic artifacts including old Pirates banners and Franco Harris' Immaculate Reception shoes.

Appendix 2: Site Visit Examples/Styles

Eljean Madio
11/4/2010

Site Visit "Draft"

Site: Hawaii's Plantation Village (Museum)
94-695 Waipahu Street, Waipahu 96797

Contact info

Email: hpv.waipahu@hawaiiantel.net
Phone: 677-0110
Contact name: Rechie Panganiban *see emails
Website: <http://hawaiisplantationvillage-info.com>

Expected visit date: Wednesday, November 10 at 10am for docent-led tour

Web information about the site:

This site is a historic outdoor museum located in Waipahu that prominently displays the lifestyles and experiences of Hawaii's plantation workers. It includes furnished homes and other community structures of the multi-ethnic and cultural groups of immigrants that came to Hawaii in the mid 1800s and the 1940s to work on sugar plantations. Some of these structures are original while some are replicas. This museum also showcases an on-going cultural display on "Portuguese in Hawaii" which I will include in my paper. According to the website, the outdoor museum offers exhibits, artifacts, and library and photo collection of the plantation history, which includes documents, correspondence, birth and death certificates, medical records, employee ledgers, and scientific testing. I will definitely utilize these resources to further my research.

Significance of the Plantation Village:

In the late 1800s and early 1900s, Hawaii became known for its plantations, especially sugar plantations. Labor was needed as plantations grew, especially since the Hawaiian population dramatically decreased due to disease and would not be able to make up the majority of the labor force. Thus Asian immigrants were brought in to work on these plantations, primarily Chinese, Japanese, Portuguese, and Filipinos. Because they^{were} together in close quarters in plantation villages, lots of cross-cultural encounters and exchanges occurred. Pidgin was one of the products of the multi-cultural and multi-ethnic exchanges because it was a way to communicate with all these different groups. There were also cultural encounters and exchanges that occurred between these workers and the white plantation owners as well.

Sources:

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- Gescewender, James A., Rita Carroll-Segun, and Howard Brill. "The Portuguese and ^{Hawaiians} of Hawaii: Implications for the origin of ethnicity." *American Sociological Review*, 1988: 515-527.
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- MacLennan, Carol. "Kilauea Sugar Plantation in 1912: A Snapshot." *Hawaiian Journal of History*, 2007: 1-34.
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- Rego, William, Trinidad Marcella, Emigdio Cabico, Slim Robello, and Harold Shin, interview by Araceli Agoo, et al. (May 1977).



Eljean Madio <emadio@my.hpu.edu>

History project and visiting the plantation

2 messages

Eljean Madio <emadio@my.hpu.edu>

Wed, Nov 3, 2010 at 10:13 PM

To: hpv.waipahu@hawaiiantel.net

Hello,

My name is Eljean Madio and I am a student at Hawaii Pacific University. I am interested in researching the history of plantations in Hawaii for a "Site Visit" paper in my Encounters and Exchanges in Modern World History course. I think this would be a great topic because of the multi-cultural encounters and exchanges between various immigrants that occurred in these plantations and am excited to learn more about this history.

It would be great to be able to visit the Plantation Village and learn more about this. I believe Hawaii's Plantation Village can be a great resource to my project. Is it possible to arrange a guided tour for myself and a friend? A personal tour would be best, but I understand if this is not possible and can attend a guided tour at your open hours.

It would also be great if I could speak to and interview someone to get their insights on this part of Hawaiian history, such as a volunteer at the museum. Will this, too, be possible?

Thank you so much for your time and I look forward to hearing from you!

Cheers,
Eljean Madio

Rechie Panganiban <hpv.waipahu@hawaiiantel.net>

Thu, Nov 4, 2010 at 8:35 AM

To: Eljean Madio <emadio@my.hpu.edu>

Thank you for considering us. We have guided tour only, Monday – Saturday from 10am – 2pm every hour on the hour.

Mahalo!

Hawaii's Plantation Village

94-695 Waipahu Street

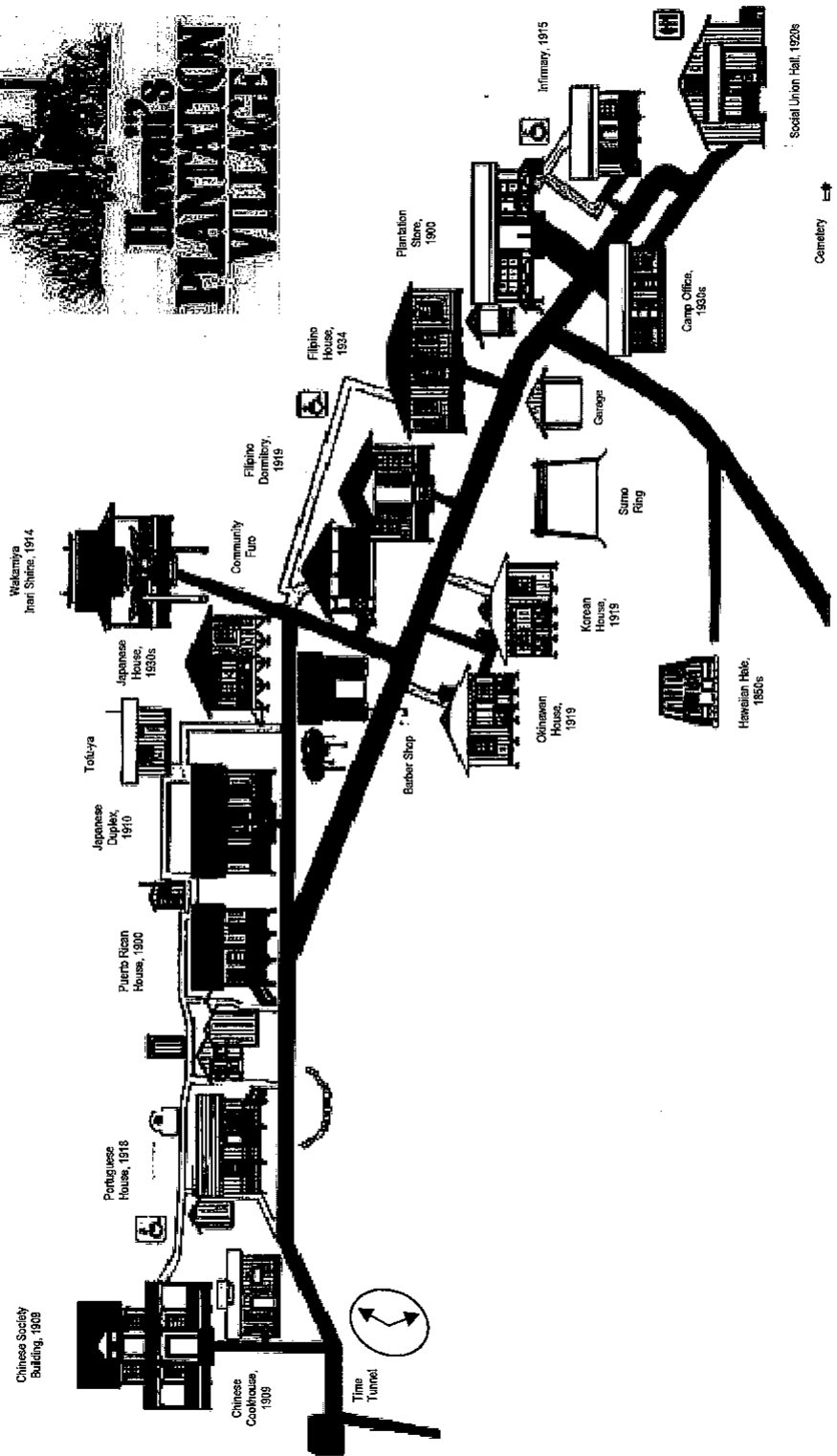
Waipahu, HI 96797

Phone: 808.677.0110

Fax: 808.676.6727

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HAWAII'S PLANTATION VILLAGES



Site Visit to Ecological Sensitive Area:

He'eia Fishpond

INTRODUCTION



He'eia Fishpond in Kaneohe, in Ko'olaupoko district, on Island of Oahu offers a rich opportunity to understand what fishponds used to mean to ancient Hawaiians and what possibilities they could provide today. The value of the site is enhanced by tours directed by Keli'i Kotubetey who is a senior program coordinator or Aina Momona Coordinator. Keli'i is part of Paepae o He'eia which is a private non-profit organization that was established to take care and maintain He'eia Fishpond since 2001 for the community. ITS vision is "to perpetuate a foundation of cultural sustainability for communities ('ohana) of Hawai'i through education" and their mission is "to implement values and concepts from the model of a traditional fishpond to provide physical, intellectual and spiritual sustenance for our community" (<http://www.paepaeoheeia.org/>).

HISTORY OF THE HE'EIA FISHPOND

In prehistoric Hawaii, Hawaiians were the most skilled and knowledgeable and very respectful of the environment they lived in. The ali'i (chiefs) took advantage of calm waters and came up with sustainable technology of building and maintaining fishponds without necessarily interfering too much with the Mother Nature. In Hawaii, aquacultures as well as agriculture were important and main sources of food. In the past all the lands in Hawaii were assigned to and under control of Ali'i (chiefs). In mid 19th century Ha'ikū Valley and He'eia Kea as well as He'eia fishpond were assigned to High Chief Abner Pahi who was a father of Princess Bernice Pauahi who later became wife of Charles Bishop. Upon Pahi's death, Princess Pauahi became the one who was responsible for maintaining the fishpond. After her death, in 1884 her estate that included He'eia fishpond became part of the Bishop Estate which was established by her husband Charles Bishop. Therefore, as of today He'eia fishpond is maintained and owned by Kamehameha Schools Bishop Estate. For many years the fishpond was family run while owned by Bishop Estate.

Between 1987 and 1999 the for-profit organization was leasing He'eia fishpond from Kamehameha Schools Bishop Estate, and was responsible for maintaining and well being of the fishpond. They were doing quite well and with help of Western and Hawaiian techniques the company was able to sell domestically and internationally about 70,000 pounds of moi (thread fish) annually and 1,000 pounds of Florida species *Ogo* (type of algae) weekly. The success lasted until 1999 when all the fish they were raising in the fishpond died and the company was forced to file a bankruptcy. From 2000 Paepae O He'eia, non-profit organization, signed a lease with Kamehameha Schools Bishop Estate and took over the responsibility of maintaining the entire property that is spreading on 97 acres and includes fishpond that is 88 acres large in which from 2006. In the past, the adjacent property that belongs to He'eia State Park used to be part of property owned by the Princess Bernice Pauahi. However, many years later State took that parcel from the Bishop Estate and created a state park as it is today.

Paepae O He'eia organization depends on federal and state grants as well as on private donations and much appreciated volunteering help from the community. Each year about 3000 volunteers participate in programs involving the maintenance fishpond and its surrounding. One thousand of these volunteers are involved in summer which makes June, July and August the busiest months of the year for Paepae O He'eia. In return, besides educational programs available throughout the year, community has been able to purchase relatively inexpensive and mainly local, fresh, and healthy fish from the pond from 2006 to October 2009.

In late 1800 there were about 400 functioning fishponds in Hawaii, 100 of which were located on Oahu. Today, sadly, there are only about 20 fishponds throughout the Hawaii. According to Kamehameha Schools Distance Learning Department's website in 1960 there were only six functioning fishponds reported on Oahu.



Back in the traditional days, fishponds were created as stocking ponds to raise fish and functioned like “refrigerator” to the community. These fishponds were primarily on the south and east side of the island (Windward and Pearl City area) so they were protected from the waves and were created in the shallow calm waters. Most of the fish Hawaiians consumed during the year came from the ocean; however, there were months of the year when deep water fishing wasn't possible. For example, during the winter months the weather and surf conditions were not favorable, and other times it was inefficient for the long term benefit to go out and deep fish for the wild fish. People at the time had an enormous respect and knowledge of the ocean. Their system focused on the certain breeding cycle during which it was inappropriate to fish from the ocean and that's when they utilized the fishponds at most.

Sadly, the difference between traditional and modern ways of agriculture or aquaculture is that in the past the focus was to utilize the resources from the long term perspective and protect the resources for the future generations. Little did they know that the future generation will change their focus on short term benefits and on maximizing profits.

FROM PAST TO THE PRESENT

He'eia Fishpond is unique in a sense that it consists of fresh water that enters the pond from the He'eia Fishpond's structure consisted of seawalls (*kuapa*), gates and sluice grates (*makaha*), and guard houses (*hale kia'i*). He'eia fishpond, like many others, is a seashore pond that was created by building a wall of lava rock (*pohaku*) and coral (*ko'a*). According to the Kamehameha Schools Distance Learning's website, the He'eia fishpond's wall is 5000 feet long which is one of the longest walls of any fishpond on Oahu. The depth of the wall varies. The deepest point is about 8 feet at the high tide. The wall is the most important structure of the pond and offers protection from the predators. However, the wall needs to be maintained regularly as any holes in the wall can cause many damages. Old Hawaiians knew that characteristics of coralline algae, a lime-secreting seaweed that grows on coral that was placed between the lava rocks. The algae naturally bonded the reef with the lava rock and functioned as cement which strengthened the wall.

Keapuka Flood in 1965 devastated He'eia fishpond and had catastrophic effected on community as well. The flood tore down the back side of the seawall at the fishpond and created a hole that has been very difficult to repair. The hole is about eight feet deep and twenty feet wide. The fishpond drained at every low tide. Once the for-profit organization became responsible for the fishpond, they built a temporary wall that is still in place till this day. Moreover, they repaired many different holes that caused leakage and mainly affected levels of the water in the pond which was crucial in order to use old traditional technologies involving high and low tides. However, the wall they built wasn't high enough and during the high tide the predators could enter the fishpond and other fish could leave. Therefore, large steal pens began to be used in the pond for fish protection and successful growth of fish. Today Paepae O He'eia is trying to renovate the wall to its original shape and form. However, it's a difficult task that needs many helping hands and lots of time.



He'eia fishpond has six gates. The gates have grates which allow the little fish to enter and the keep all the predators out. Also once the little fish entered and grew inside of the fishpond they could not leave the pond – as long as the seawall didn't have any

leakage. Hawaiian people possessed admirable knowledge of the real sustainability that we are trying to re-learn again already at ancient times. One could say that they used their strong intuition and took the simple fishponds and fish traps into another level. They used moon, tides and overall biorhythm of the nature to attract and temp fish into the fishpond. They didn't go out to the sea to catch the fish and bring it to the fishpond and they didn't use nets either as was common throughout the Polynesia. They strictly used the gates and their knowledge of biorhythm of the ocean life to attract baby fish into the pond and catch the big fish.

In low tide, meaning when the water outside of the wall was lower than inside of the pond, they raised the gates and the water would start rushing out of the pond into the ocean. All the little fish would get attracted by the strong flow of water and the nourishments from the pond and they would start swimming against the current into the calm waters in the pond. When it was time to harvest the big fish from the fishpond they waiting until a low tide and opened up one or two gates and the water started to rush in from the ocean into the pond and the big fish started naturally swimming against the current towards to the open gate where they could easily be caught by a pond keeper without literally getting wet.

In the past, there was a guard house sitting on top of the hill. Today there is an empty lot sitting there. However, the good and exciting news is that the construction has began in December 2009 and hopefully within a year or so there will be a guard house as it was before. The role of the guard house was obviously guard the fishpond mainly at night as unfortunately it is not only important to protect the fish from the natural predators from the ocean but also from the human beings. As we all know there are people without a backbone in every community who are capable to come to the pond at night and simply steal the fish. I'm convinced that the guard house will be the avenue and the only way to protect the fishpond and hard work of members of Paepae O He'eia organization and those 3000 volunteers. Moreover, I was told that in the past there used to be little houses, called hale at the gates. Responsibility of the person sitting at the hale is to watch for predators and for microscopic plants and animals as well as at the time of harvest catching or better said scooping up the fish at the gates.

Paepae O He'eia started raising fish in 2006. They raise mainly Moi and Awa fish. It takes about 9 to 12 months to raise Moi fish and about 2 to 3 years to raise Awa fish. However, there isn't any fish being raised at the pond today. In October 2009 there were about six extremely hot days without any trade winds and all the fish in the He'eia fishpond's pens have died. The Paepae O He'eia learned their lesson, as Keli'i said, and suddenly understood that some interaction with the nature has its negative consequences. What happened was that the fish that lived in the pens have basically died from the overheating. The water got too warm and without any trade winds the oxygen levels got lower as well. The fish that lived in free in the pond survived mainly because it could swim in the colder waters closer to the wall and hide from the heat. It became obvious that exactly the same thing happened in 1999 when the for-profit organization at that time lost all their fish and had to file a bankruptcy. In my opinion, it makes absolute sense to have a non-profit organization responsible for taking care of the natural resources such as fishponds. Their priority is not to maximize profit but to do the right thing for the nature and community.

After the accident Paepae O He'eia released about 150,000 fingerlings into the fishpond outside of the pens; however, two weeks later they couldn't see any. That means two things – there are holes in the wall or there are predators in the pond. As Keli'i mentioned every year they would invite fishermen to come and fish for the predators that found their way into the pond. And every year they catch large barracudas and other predator fish that enjoy the calm and nutritious water of the pond. The reason why there isn't any fish today is that Paepae O He'eia used to purchase fingerlings from Oceanic Institute but right now they don't have any fish for sale for multiple reasons. The Paepae O He'eia is concerned about single biggest threat to marine ecosystem and that is over fishing and therefore is not willing to add to the problem by catching wild small fish for raising them in the fishpond. However, until October 2009 95% of the fish harvest from the He'eia fishpond, generally Moi and Awa, was sold to the community and 5% to local restaurants, mainly to Haleiwa Joe's in Kaneohe and Town in Kaimuki. Besides the fish, Paepae O He'eia also sells to the community its limu - gracilaria salicornia - which is popular for poke.

ADDITIONAL CHALLENGES

This month, on February 6th, with help of volunteers Paepae o He'eia organization pulled out 5500 pounds of limu from the pond. Acanthopora spicifera limu as well as gracilaria salicornia limu are both used as mulch because of its high levels of potassium and therefore functions as a great fertilizer for the soil. All 5500 pounds were donated to Waiahole farm that uses it for their fields. These kinds of sustainable practices make me feel like we can re-learn what we lost over the years. The problem and challenge He'eia fishpond faces in that most of the algae that grows in the pond is invasive and none of the fish eats them. That means that algae keeps growing and can affect the habitat for the fish. First of all algae breeds at night and consumes lots of oxygen from the water. Therefore, the it is very important that algae is pulled out of the pond regularly and repeatedly as algae has a vegetative reproduction and keeps growing even if cleared away. In the past, people didn't have to worry about most of these kinds of invasive and introduced plants and fish.

Additionally, mangrove is also one of the introduced plants that have been very destructive for the fishpond. Around the pond there is altogether 7000 ft of mangrove that needs to be destroyed. Paepae o He'eia already destroyed and cleared about 2000 ft of mangrove but there is a long way ahead of them to free the pond from the fast growing mangrove. They grow on average one foot a year.

CONCLUSION

Hawaiian ancestors used their intuition and incredible knowledge of the environment we're all part of. They understood the importance of sustaining Hawaii's unique natural environment. Their hope was to pass on them created sustainable "technology" to future generations so people could live in harmony with the nature. They meant to teach us how to use natural resources in a respectful way and don't take advantage of the natural resources to the point that it naturally perishes. However, people have changed and their views and priorities have changed. Therefore, restoring and keeping fishponds alive is absolutely crucial. Organizations such Paepae

O He'eia is in my opinion like drop of hope and sign of change. The education about sustainable technology is absolutely necessary. The only problem is that we live in society where our labor doesn't go to food we eat but it goes to money we need to be able to eat. I talked to Keli'i about the chance of restructuring of other fishponds in Hawaii and I had to agree with him that unless these kinds of jobs are paid better which would require them to be subsidized by the government or unless the society increases demand for local fish grown in the fishponds the restructuring will be very difficult. It is expensive and long process to revive and maintain fishponds. I do believe that education and awareness is the key to the change for the better. The more people are educated about negative effects of modern fishing the bigger chance for increased demand for local products. People were taught not to worry where their food comes from. They were taught that as long as you have money, you can go to the store and buy your food. Now we can see that people are starting to ask questions what's in their food and where does it come from. All of this can have a positive effect on future of fishponds around the world.

Keli'i's responsibility is to raise awareness of the fishpond to the community and he is responsible for educational as well as volunteering programs. From the very first moment I spoke with Keli'i I on the phone, he was extremely helpful and his positive energy and attitude were evident. He agreed to meet me at the fishpond at my convenience and to give me my very own tour. Keli'i was born and raised in Kailua, Oahu. In 1996 graduated from Kamehameha Schools, then finished BA in Economics from Whitman College and finally received a Masters in Business Administration from University of Hawaii. He is very passionate about the work he and the Paepae o He'eia organization are doing as well as for the work his ancestors have done and passed on to many generations thereafter. A visitor naturally finds his passion contagious and shares in his pride for those ancestors who created such a simple and incredible technology without the industrial revolution. Their technology worked and in many ways worked better than results of our modern green revolution. Paepae o He'eia organization uses the ancestral knowledge with modern Western knowledge to maximize the strength and benefits of the fishpond for the environment and community.



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Site Visit to Company:

Site Visit Report Company Example Interview with Sustainability Coordinator and Plant Tour at Hagadone Printing Company



Hagadone Printing Company is the largest commercial printer in the state of Hawaii, and is made up of 140 employees in nine departments. The company is owned by Hagadone Corporation, located in Northern Idaho, which owns and operates a group of diverse businesses in the publishing and hospitality industries. In the early 1990's, the parent corporation acquired several Oahu businesses which were merged to form the present day Hagadone Printing Company in 1995. Thus, Hagadone is a well-established business in Hawaii. Already in 1994 Hagadone Printing Company President Erwin Hudelist received the Investing in the Environment award from the State of Hawaii. When the company began on its journey to sustainability in the early 2000's, the community took notice, and today Hagadone is known as a leader in environmental and social sustainability.

Hagadone's print green initiatives make a real difference to the environment. According to Ashley Smith, who is currently working as a Sustainability Coordinator intern at Hagadone Printing, the company has made some significant changes in their business practices to become more sustainable. 20,219 full-grown Trees have been saved to date; 60,000 will be saved this year; 14,974,903 gallons of Water have been conserved; 44,437,720 gallons will be conserved this year; 20,148 millions of BTU's (British Thermal Units) have been conserved; 59,789 BTU's will be conserved this year; 1,286,420 metric Tons of Solid Waste have remained out of our landfills; 3,817,424 metric Tons will stay out this year; 3,964,393 tons of Greenhouse Gas Emissions have remained out of our atmosphere; 11,764,256 tons will be suppressed this year (Hagadone Printing Company, 2008). These facts make Hagadone Printing Company a real leader in the field of environmental and social responsibility.

Smith informed me that Hagadone Printing Company has already years ago eliminated harmful chemicals and toxic materials from their printing processes. Silver run-off, benzene and isopropyl alcohol are no longer used. Direct-to-plate printing has virtually eliminated film-based printing. And their liberty brand inks are formulated so they produce no volatile organic compounds that pollute the air.

Conserving energy has also been a priority at Hagadone Printing Company. In 2003 they made improvements to their building's electrical system that recovers "drainage" energy. Two years later they replaced all their old light fixtures with energy-saving T5 and T8 fluorescent lights. More recently, they replaced all of their office incandescent light bulbs with CFLs.

At the end of 2005 Hagadone Printing Company invested \$11 million in a state-of-the-art web press and infrastructure improvements. The new press, which runs on natural gas, uses half the energy of their old web press and has an eco-cool oven that recycles ink solvents, resulting in zero emissions (Hagadone Printing Company, 2008).

This year Hagadone Printing Company purchased an industrial shredder/baler system that will help them to recycle 140 tons of waste paper per month, plus what they collect from the community. Their PaperBack Program allows customers to return the extras of print jobs to them for recycling. At places where their delivery drivers make regular stops they will even pick up the paper, as for example at Hawaii Pacific University. For customers who visit the company, they have a convenient drop off area. According to Smith, Hagadone has recycled more than 11 million pounds of paper since they installed their shredder/baler system in 2007. She said "that is a lot of paper that did not end up in Hawaii's landfills, not to mention the trees that were saved."

It is important at Hagadone Printing Company to keep in mind all aspects of sustainability – environmental, economic, and social - when doing business. To further lower their environmental impact, the company has decided to start a Carbon Offset Program. According to Smith, the company is constantly striving for improvements with the ultimate goal to be a zero waste facility. Hagadone started to voluntarily offset its carbon output by purchasing carbon offset credits. For each printed page, Hagadone purchases carbon offset credits in an equal amount, reducing the negative impact on our world to virtually nothing.

During my conversation with Smith, she told me that compliance to reduce carbon emissions is already being regulated by mandatory regional, national and international policies such as the Kyoto Protocol and European Union's Emissions Trading Scheme. The United States, however, is not bound by either of these standards. In December 2009, the United Nations Climate Change Conference held in Copenhagen, tried and failed to produce a binding global resolution to reduce carbon emissions. Since world leaders and governments have not come to a consensus on reduced emissions targets in the urgent timeframe that is needed, individuals and business organizations are increasingly looking to reduce their carbon footprint in their own way, and the voluntary carbon market has emerged to fill this need. Carbon offsets are a tool that enables individuals and business organizations to compensate for or "offset" their carbon emissions by purchasing carbon offsets from a validated third party. What is actually being purchased is a credit that represents one ton of carbon dioxide being retired forever so that the global greenhouse gas emissions will be reduced. Carbon emissions can be offset through one or a combination of the following most common types of projects: renewable energy, energy efficiency, and reforestation.

Smith told me that during her internship at Hagadone Printing Company she learned that offsets are a good way for polluters to take some responsibility for their carbon footprints and a positive step towards reducing global carbon emissions. She

explained that when Hagadone Printing Company first looked into investing in carbon offsets, they considered the following issues, as outlined by the David Suzuki Foundation (2009) in its guide to purchasing carbon offsets:

- What type of offset projects do you want to invest in? With a wide variety of renewable energy, energy efficiency and reforestation projects available for purchase, and prices of carbon offsets being so varied, critics often question the validity of being so called “carbon neutral.” For example, a tree planting project might not pay off until 50 or more years, and does not address our dependence on fossil fuels. On the other hand, renewable energy projects like wind farms and basic home efficiency projects like weatherizing, have guaranteed, measurable results.
- Are your offset projects certified by a recognized standard? There are several standards for carbon offsets, the most common of which were recently published by the World Wildlife Fund. The Gold Standard is the most stringent certification. All Gold Standard projects have been independently verified by a third party and include social and environmental indicators to ensure the project contributes to sustainable development goals in the country where the project is based. Only offsets from energy efficiency and renewable energy projects qualify for the Gold Standard because they encourage a legitimate shift away from fossil fuel use and have low environmental risks.
- Do your offsets meet additionality criteria? Some critics point out that these climate protection efforts would have been implemented regardless of the selling or trading of carbon offsets. “Additionality” means that the carbon offsets purchased will contribute to additional sustainable energy projects rather than funding existing projects. There should be a net benefit for the climate that would not have happened otherwise.
- Are your offsets validated and verified by a reputable third party? The voluntary carbon market has been criticized for being largely unregulated. Because there are so many third parties and standards, it is important for the buyer to thoroughly evaluate the carbon offset providers, and standards before purchasing carbon credits.

After considering these issues, Hagadone Printing Company has decided to purchase carbon offsets for several reasons. Smith said that with Hagadone Printing Company operations in Hawaii, some emissions cannot be avoided: trees are cut down for the paper it uses, and fossil fuels are burned in the transportation of the paper to Hawaii and in the printing production process itself. Purchasing carbon offsets has reduced this carbon footprint. According to Smith, this purchase should be considered an investment in reducing pollution which cannot be eliminated otherwise.

Upon deciding to purchase carbon offsets, Hagadone Printing Company had to carefully evaluate and choose the provider, type of project, and standard by which it will be certified. This is important to avoid “getting burned,” wasting money and risking bad public relations with clients and the community. Therefore, Hagadone Printing Company decided to invest in carbon offsets that go to local projects, such as energy efficiency projects in Hawaii households, from which the community will directly benefit.

By offsetting its carbon emissions, Hagadone Printing Company is taking a positive step toward becoming a sustainable

business. Smith says that employees and clients feel good about being socially and environmentally responsible. Offering to offset the carbon emissions of a client's print job further reinforces the positive image of Hagadone Printing Company in the community for promoting sustainability. Printing carbon neutral is marketed to current and prospective clients who want an environmentally-conscious printer. The added expense of carbon offsets is financially justified by the increased sales revenue that is generated as a result. Finally, by purchasing carbon offsets, Hagadone Printing Company is ahead of the game in the event that legislation is passed that mandates the offsetting of carbon emissions.

Consumers are increasingly more aware of their carbon footprint and are therefore demanding environmentally friendly goods and services. Hagadone Printing Company has started early to become more sustainable by eliminating harmful chemicals and toxic materials, conserving energy, investing in a new press with zero emissions, and establishing an extensive recycling program. Now, with the company's latest environmental effort of purchasing carbon offsets to reduce the impact of its carbon emissions, the company maintains its position as a leader in sustainability and environmentally conscious printing. Moreover, these carbon offsets are invested in local efficiency and renewable energy projects so that they directly benefit the community.

My interview with Ashley Smith was highly interesting and I learned a lot about Hagadone Printing Company and its environmental efforts. Especially her knowledge about the Carbon Offset Program was very instructive and I learned a lot how the company established the program. The plant tour was very informative, too. I got to see their new state-of-the-art web press, the recycled and FSC certified paper they use as well as their liberty brand inks that produce no volatile organic compounds. With all these efforts, Hagadone Printing Company has truly proven that they are a leader in environmental and social sustainability.

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Site Visit: a Farmer's Market

Farmer's Market and GIFT Donation Project

Site Visit

Hawaii Pacific University



Over the past 6 years demand for farmers' markets boomed. Farmers markets began few years ago as a small produce market. Even just two years ago the most popular farmer's market on south shore of Oahu, at Kapiolani Community College was relatively manageable without extra coordination. Not too many people used to come, parking wasn't a problem and you could walk through the aisles without feeling claustrophobic. This observation might seem negative but the opposite is true. The farmer's markets became so popular that today when I arrived at 7:30 AM to the one at Kapiolani Community College I had a tremendous problem with parking. There were multiple police officers who were directing the traffic of cars and people. Moreover, there were so many people that it almost didn't feel like being outdoors at the open air. The demand for fresh, local produce has grown so much that there is farmers market almost everyday of the week at different locations all over the island. These markets provide a great opportunity to purchase fresh, local and most of the time organic products, flowers & plants, arts & crafts and even some prepared food items.

United States government doesn't require labeling of Genetically Modified Organisms, use of pesticides, herbicides, antibiotics, hormones or any other chemicals. Therefore, consumers' awareness of what's in their daily diet is limited and one could even say "censored". The food industry doesn't believe that consumers need to be fully aware and informed about quality of the food they purchase as long as it's been approved by FDA and USDA. Consumers has basically been tricked into buying cheap, factory farmed food that is "regular and good for you" without having the opportunity to really know how "good" it is. I dare to say that many people still don't know how their food is being produced and what the possible consequences of factory farmed and genetically modified products that are widely available in grocery stores all over the United States are. Over the past few years some documentary movies focused on food production, for example Food Inc., Future of Food, King Corn etc. These movies raised awareness of some

major issues in the current food industry and most importantly raised many questions that changed the demand of people who care about their health, their environment and social and corporate responsibility for quality food. These people began to support local farmers and shop at farmers' markets on regular basis.

FARMERS' MARKETS

Farmers' markets on Oahu are sponsored by Hawaii Farm Bureau Federation and co-sponsored by Department of Agriculture (www.hfbf.org). According to their website "the Hawaii Farm Bureau Federation (HFBBF) was organized back in 1948 by a group of farmers on the Windward side of Oahu. It was then that the very first Farm Bureau meeting was held. In 1950, the HFBBF was formerly incorporated and has grown into the present statewide organization consisting of approximately 2200 member families in ten counties located throughout the State" (www.hfbf.org). The Hawaii Farm Bureau Federation (HFBBF) is a non-profit organization and it consists of farming families. Their purpose is to analyze problems and create action to ensure the future of agriculture and well-being of farming in Hawaii; therefore, support local economy with local production.

Farmers' markets offer all Hawaii grown and diversified products. According to Hawaii Farm Bureau Federation's website buyers can "select from a wide variety of fruits, vegetables, flowers, beef, aqua cultured seafood, fresh baked breads, hand made pastas, tropical jams and jellies, unique snack foods, honey, baked goods, specialty seasonings and more. More than 2 dozen vendors display and sell their products each week" (www.hfbf.org). Many people are consistent and determined not to use plastic bags during their shopping. Majority of shoppers brings their reusable bags which is a key in green and environmental movement. According to the Environmental Literacy Council "it is estimated that somewhere between 500 billion and one trillion plastic bags are consumed throughout the world each year" (www.enviroliteracy.org).

The plastic bags began to be used in 1977 and the average life of one plastic bag is 12 minutes, in one minute there is 1 million bags being used worldwide. All these bags end up in the local landfill. Most of the landfill sites are based on the coastline near the oceans. Environmental Literacy Council stated on their web site that "plastic bags pose a threat to marine life, because, if ingested, the bags can block the stomach and cause starvation. Sea turtles, for example, mistake plastic bags for jellyfish. In 2002 a minke whale that washed up on a beach at Normandy was found to have 800 grams of plastic and other packaging in its stomach. Stray plastic bags can also clog sewer pipes, leading to stagnant, standing water and associated health hazards" (www.enviroliteracy.org). Moreover, according to their web site 90% of the bags being produced and used are non-biodegradable. Strangely enough some supermarkets double bag everything!!!! This is why it is crucial to educate people, raise awareness and advertise reusable textile bags at the farmers' markets and grocery stores. Picture below shows people using their own bags at the farmers markets.



GIFT DONATION PROJECT

This Saturday Green Club was volunteering at the GIFT donation project's booth. GIFT donation project is a project founded by Vivian Chau based on fresh produce donation and distribution. GIFT stands for Give It Fresh Today and their mission is to collect fresh products from the farmers' markets via buyers and/or sellers donations and distribute locally grown food to organizations that help to feed those in our community who are less fortunate and have fewer choices about what they eat. Vivian began her adventure with the blessing of the Hawaii Farm Bureau Federation in January at the Kapiolani Community College farmers' market and already collected about 1,100 pounds of fresh food. According to Vivian Chau she "chose to start this program at the farmer's market because people who shop there are already making an effort to support local agriculture with their purchases. Many shop at the market because it is aligned with their environmental or health values. Our project gives the shoppers an opportunity to support the farms that they love, while supporting organizations that help to feed the hungry. We get to support these organizations by offering healthy, locally-grown food. It helps keep more money flowing through our local economy" (www.greenglobeideas.com). The idea is simple and used on the mainland. People shop and buy something little extra which gets to be donated. Shoppers can contribute any excess produce they buy at the market. It's convenient and that is the key to success because this project proved that if you make it convenient for people they'll gladly do the right thing. All they have to do is to drop it off at the GIFT booth. It's a triple win situation. Win for shoppers wanting to make a difference. Win for the farmers whose unsold produce might otherwise go to waste. Win for the people at the shelters that get much needed and rare fresh foods.

GIFT donation project works mainly with Institute for Human Services and Unity Church, which collects and serves food for various organizations. HIS and Unity Church's trucks usually arrive at the farmers' market around 11:15 AM and pick up boxes full of donations. It's that simple. No hassle, no problems, just good deeds. Organizations like Food Bank are extremely important as well; however, most of their donations are in form of canned and non-perishable foods. GIFT donation project's focus is to provide some fresh and healthy alternatives to the people in need. I was amazed that right in the morning at 7:30 AM the local bakery donated about 20 pallets of fresh bread and apparently they do that every week. Then people started to stop by and drop off watermelon, bananas, pineapples, lettuce, and other kinds of vegetables and fruit. It's simply amazing that such a little idea turned into such a wonderful and successful project. As Vivian said she has a full time job, GIFT is only a project to her. Her goal is to show people that helping others doesn't take a lot. It takes organization in general which can be just a project. Everybody could have a project. The world would be a better place for everyone.

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